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ADDRESSES.

BENJAMIN RUSH.

An Address delivered before the American Medical Association at its Annual Meeting in Newport, R. I., June, 1889,

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Time, which destroys so much, has dealt kindly with the fame of Benjamin Rush. Like his great master Sydenham he was distinguished during life, and distinguished not through the absence of able rivals, but owing to surpassing power. But as with all true renown his fame has endured and grown, and it seems not unlikely that he will remain forever with us, not, it may be, as the greatest of our physicians, but as the first of our great physicians.

His life of ceaseless, restless activity demands and will repay full description when all interdiction is removed from his private papers. I hazard the prediction that the largest publicity will but show more clearly the purity and intensity of his patriotism, the vivid and unselfish interest shown by him in every question which affected the happiness, the honor, or the prosperity of his country; and the undaunted courage which made it impossible for him to be away from the front in every struggle. But it seems to me that the political services[1] and influence of Rush—important as they were—have comparatively little to do with the position he holds with us to-day. He never was a politician, though often engaged in public affairs. His high spirit, his impetuosity, his transparent character kept him for the most part aloof from political intrigues and dealings in which they would have prevented his success. He never sought political office or preferment. The appointments he held were alike honorable, laborious and unprofitable. He signed the Declaration of Independence, not merely because he was a member of Congress, but because he had been appointed for that specific purpose by the State Convention of Pennsylvania. The appointment followed the presentation of his report, as chairman of the committee to consider the question whether it had become expedient for Congress to declare Independence. This report is a vigorous and animating production; and so closely does it foreshadow the leading features of the Declaration of Independence, that it might appear to be a protocol or rough draft of that immortal document. He discharged with great energy and efficiency the laborious duties of his positions as Surgeon-General, and later as Physician-General of the Army of the Middle Department; and like Washington and Franklin, and others in those primitive days, he refused pay for his public services. During those memorable years he wrote vigorous and influential papers and letters on the organization of the General and State Governments; but even then he was diligent in medical observation and writing.

He shared the doubts of Samuel Adams and

NOTE.—I am indebted to the family of Dr. Rush for the opportunity of consulting and making extracts from some of his correspondence.

A careful examination has also been made of the large collection of letters (for the most part letters written to Dr. Rush) deposited in the Ridgway branch of the Philadelphia Library; with the exception of a single volume presumably containing matter, personal and political, of interest to the historian and biographer which is there held in reserve.

I may add that in order to place myself in a fair position to judge of his work and influence, his entire published writings have been read twice—once rapidly, once critically; and all accessible publications concerning him have been, in very large number, consulted.

[1] The importance and extent of these services may be gathered from this brief statement:

In 1776 (æt. 31) he was a member of the Provincial Conference of Philadelphia, and of the committee to which was referred the great question, whether it had become expedient for Congress to declare Independence. He was chairman of the committee; the report they submitted was adopted and sent to Congress. This report includes nearly all that has been so much praised in the Declaration of Independence, of which it might appear to be the protocol. He was appointed by the State Convention a member of Congress, in order that he might sign that Declaration.

He was appointed Surgeon-General of the Army of the Middle Department in 1776; in 1777 he exchanged this position for that of Physician-General.

He published important papers on public events; especially four powerful letters on the Pennsylvania Constitution of 1776; a remarkable address in 1785 entitled "Considerations on the Test Laws of Pennsylvania;" and many able though shorter articles in 1786–1787 in favor of the adoption of the Federal Constitution. He was a member of the Convention of Pennsylvania for the adoption of that instrument which he thus describes: "It is a master-piece of human wisdom, and happily accommodated to the present state of society. I now look forward to a golden age. The new Constitution realises every hope of the patriot and rewards every toil of the hero. I love my country ardently, and have not been idle in promoting her interests during the session of the Convention. Everything published in all our papers, except the *Foreign Spectator*, was the expression of our Federal principles." Allusion has been made elsewhere to his successful labors for amelioration of the penal code; it was apparently in large part to accomplish this and the establishment of public schools that he accepted membership in the State Convention in 1787 for the formation of a State Constitution. He was then 42 years of age, and from that time onwards, although he always took a lively interest in every important public question, he devoted his whole energies to the cause of medical science and medical education.

Richard Henry Lee as to the military genius of Washington; and his unshrinking courage and vehement spirit led him into positions and expressions which he doubtless regretted later when time and events had demonstrated the rare qualities of the great leader. But at the same time (1785), he projected the Philadelphia Dispensary, following the example of Franklin in regard to the Pennsylvania Hospital, and devoting himself with equal vigor and success to the collection of funds. He carefully prepared the public mind by describing the advantage of such an institution, for it was the first of its kind in the United States. Public interest being aroused, combined efforts secured such liberal contributions that the Dispensary was placed upon a permanent basis, and for more than a century has continued its unostentatious but precious work. It is needless to remark that its example has been followed in hundreds of places. He had already attained such prominence in medical circles that in 1789, when the College of Physicians was established, he was called upon to prepare an address on the objects of the institution, which is published in the Transactions for 1793. It is a vigorous production, altogether worthy of the occasion, and with far-sighted sagacity it indicates the lines of development along which that venerable institution has grown into such gratifying prosperity.

He was profoundly interested in moral philosophy, and in 1787 read to the Philosophical Society, of which he was one of the most active members, an essay on the "Influence of Physical Causes on the Moral Faculty," which was of such remarkable originality as to attract the widest attention here and abroad. It deservedly occupies the position of a classic. In the same year he became a member of the Convention of Pennsylvania for the adoption of the Federal Constitution and of that for the forming of a State Constitution. He labored, spoke and wrote incessantly, enthusiastically and forcibly,—not for partisan or personal ends, but in obedience to the dictates of a lofty sense of patriotic duty, and to have the chance to press the reform of the penal code, and to promote public education.[a]

He was among the first to oppose capital punishment. Little can be added to the indictment he brings against it as ineffectual and injurious in its influence. Nor did he limit himself to denouncing evils; his mind was essentially practical and his lively imagination was chiefly occupied with suggestions of solid utility. His "Inquiry into the Effects of Public Punishment upon Criminals and upon Society" closes with a powerful plea for a truly reformatory system of punishments. He exclaims, "I have no more doubt of every crime having its cure in moral and physical influence than I have of the efficacy of the Peruvian bark in curing intermittent fever. The only difficulty is to find out the remedy or remedies for particular vices." It is one of Rush's highest distinctions to have contributed powerfully, and probably more than all others, to the amelioration of the penal code subsequently effected.

These were years of activity which we find it hard to parallel, for the range of subjects covered, the vigor of grasp with which each is handled, and the far-sighted sagacity and practical wisdom shown in the reforms urged or the original measures suggested. If he had no other claim to fame, Rush would stand high as a philanthropist and social reformer. He was inspired by no love of notoriety, not deterred by any dread of unpopularity. He denounced the evils of slavery as early as 1771 and was, with Franklin, one of the founders of the Society for the Protection of Free Negroes; of this he was annually elected president after Franklin's death. He espoused the cause of non-jurors, and under the title of "An Inquiry into the Consistency of Oaths with Reason and Christianity," he presented a masterly and convincing argument against such tests. He was a discriminating but decided opponent of the use of ardent spirits. He did not aim at the total prohibition of stimulants, as he held

[a] The important services rendered to education by Rush merit a separate memoir. He advocated consistently the highest practicable standard of medical education. In 1792 he urged the importance of thorough preliminary study, embracing the modern as well as the dead languages. He insisted upon the study of botany, zoology, and comparative anatomy. With equal force he urged the study of medical jurisprudence, and he was a pioneer in the study and teaching and practice of psychiatry. The admirable address of Dr. C. K. Mills on Rush in American Psychiatry, read before the Medico-Legal Society of New York, Dec. 8, 1886; and the opening chapter in Hack Tuke's recent work (The Insane in the United States and Canada), which is an extended and judicious eulogium upon Rush, render it unnecessary to allude further to this, which must have consumed an immense amount of his time and energy, and which would of itself constitute a just claim to lasting fame.

Veterinary science found in him its earliest champion in America. Throughout his life he pleaded eloquently for the protection of animals from cruelty. In his inquiry into the influence of physical causes on the moral faculty in 1786he exclaims, "I am so perfectly satisfied of the truth of a connection between morals and humanity to brutes, that I shall find it difficult to restrain my idolatry for the legislature that shall first establish a system of laws to defend them from outrage and oppression." In 1807, he delivered the lecture introductory to his course "Upon the Duties and Advantages of Studying the Diseases of Domestic Animals and the Remedies Proper to Remove them;" and after an eloquent statement of the importance of the subject, and an allusion to the fact that up to that time no veterinary school had yet been established in the United States, he concluded with the following words: "I have lived to see the Medical School of Philadelphia emerge from small beginnings and gradually advance to its present flourishing condition, but I am not yet satisfied with its prosperity and fame, nor shall I be so, until I see the Veterinary Science taught in our University." This wish was not realized during his lifetime—nor until 1884, when the Veterinary Department of that Institution was established.

But it was not only in the promotion of medical education that Rush was strenuous. He published important and influential papers on the establishment of public schools; upon the mode of education proper in a republic; upon the study of the Latin and Greek languages, with hints of a plan of liberal instruction without them; and upon allied subjects. He advocated the establishment of a National or Federal University of which all office holders should be graduates (Mss. letter); and he urged and labored for the establishment and prosperity of several colleges in Pennsylvania, in addition to the long and valuable services he rendered to the University of Pennsylvania. He served on the committee to raise funds for the establishment of Franklin College at Lancaster (now the justly prosperous and celebrated Franklin and Marshall College); he was one of the first Trustees of Dickinson College at Carlisle, a liberal benefactor, and a constant and earnest friend to it throughout his life. I have been amazed at the evidence furnished by his correspondence (Philadelphia Library collection) as to the extent of his labors for this institution—of which indeed it is clear that he was then regarded as the principal founder. Surely this is a noble record of wise and public-spirited activity.

that the weaker alcoholic beverages were comparatively harmless. He did not deny that the use of spirits may be indicated in the low states of certain acute diseases, but he pleaded eloquently for legislation against the abuse of ardent spirits, and he used his immense influence as a teacher and practitioner to discountenance their employment in disease save when absolutely necessary and then only with every precaution to guard against the formation of the alcohol habit.

Rush was evidently a perfectionist. His enthusiasm over the possibilities of human nature continually breaks out into expressions of sincere exuberance. I fear he drew his inspirations more from the experience of his own nature, refined and elevated, which required no excitement but the claims of duty, and no pleasure but the pursuit of knowledge and truth, than from the observation and study of men as they actually exist. Very naturally and properly he opposed the use of tobacco as a habit attended with many injurious results. "Were it possible," he begins his observations upon the influence of the habitual use of tobacco upon health, morals and prosperity, "for a being who had resided upon this globe to visit the inhabitants of a planet, where reason governed, and to tell them that a vile weed was in general use among the inhabitants of the one it had left, which afforded no nourishment; that this weed was cultivated with immense care; that it was an important article of commerce; that the want of it produced real misery; that its taste was extremely nauseous; that it was unfriendly to health and morals, and that its use was attended with considerable loss of time and property, the account would be thought incredible, and the author of it would probably be excluded from society for relating a story of so improbable a nature. In no one view is it possible to contemplate the creature man in a more absurd and ridiculous light than in his attachment to tobacco." And so he concludes the same observations by reference to one from whom frequent evidences show that he drew much of his inspiration of humanity. He tells us that Dr. Franklin, a few months before his death, declared to one of his friends that he had never used tobacco in any way in the course of his long life, and that he was disposed to believe there was not much advantage to be derived from it, as he had never met with a man who used it who advised him to follow his example.

I do not touch upon these various points merely as proof of versatility and activity. It is a common thing to see men who acquire a certain conspicuous but temporary fame, owing to the bustling energy with which they assume many positions and mix in many affairs; but it is found that they have won no lasting credit from any of their varied work. But for Rush it is fair to claim that in all the large affairs and questions with which he dealt he showed himself a pioneer and a leader, and that he did work of capital and enduring value. Very much of this depended upon his great gifts as a speaker and as a writer. He was in truth a man of letters of very high rank. Abundant testimony shows that his medical lectures were consummately excellent—clear, impressive, eloquent, and at times instinct with dramatic power. I shall allude again to the immense effect they produced in aiding the diffusion of his medical views. His more elaborate addresses and orations are admirable, and some of them, as those on Cullen and on Rittenhouse, and his address on "The Influence of Physical Causes on the Moral Faculties," are splendid performances. Richardson[1], to whom we owe the most appreciative of recent sketches of Rush, quotes from the eulogy on Cullen what he fitly calls a golden utterance; justly applicable to Cullen, it is a true expression of the spirit which moved Rush. "That physician has lived to little purpose who does not leave his profession in a more improved state than that in which he found it. Let us remember that our obligations to add something to the capital of medical knowledge are equally binding with our obligations to practice the virtues of integrity and humanity in our intercourse with our patients. Let no useful fact, therefore, however inconsiderable it may appear, be kept back from the public eye; for there are mites in science as well as in charity, and the remote consequences of both are often alike important and beneficial. Facts are the morality of medicine; they are the same in all countries and throughout all times."

However he may have acquired it, he was master of a style in writing, of rare clearness, force and flexibility. It lends a charm to every production of his pen. His letters to his family and intimates, the discussions of important public questions, his dissertations upon medical topics, are alike composed in this attractive style. Compact and well thought out arguments; vivid bursts of imagination and passages of glowing eloquence; bits of description of microscopic accuracy; apt illustrations, drawn from nature, history, literature, art, most of all from Holy Writ; sententious phrases; these are separate merits of the style, through all of which there breathes such candor and earnestness and humanity that the reader finds himself delighted with the man, as well as with the author.

If time permitted, it would be easy to show that in the vital matter of education he was as active, as progressive, and as far ahead of his contemporaries, as he was in social science. I dare not even allude to his advanced views on the education of women, or I should be drawn into an extended eulogy of his position upon this question, which now, more than a century later,

[1] The Asclepiad, 1885. B. W. Richardson, M.D.

is but beginning to receive the attention its immense practical importance demands. His labors for the establishment of the public school system; his suggestions of "A Mode of Education Proper in a Republic;" his "Observations Upon the Study of the Latin and Greek Languages as a Branch of Liberal Education, With Hints of a Plan of Liberal Instruction Without Them," and his "Defense of the Bible as a School Book," may be pointed out as evidences of what I have claimed for him.

What deep gratitude must we ever owe, for our national stability and prosperity, to the illustrious men, among whom Rush was notable, who recognized instinctively that universal education, thorough, sound and broad, was the only safety of the new Republic, and who continued the devoted efforts which had won from foreign oppression our liberties, in order to ensure us the means of maintaining them against no less deadly dangers at home.

In every portion of Rush's writings we find constant evidence of his genuine, unaffected piety. There is a vein of truth and sincerity in it which cannot be mistaken. Unquestionably he had his hard struggles with himself, with a nature excitable, sensitive and self-asserting. He stood in the slippery places of rapid success and early popularity. It was a time when men's blood was up. Opinions were held tenaciously and fought for willingly; but throughout his writings, public and private, the subject of religion is continually referred to, and invariably in the most reverential tone, without a tinge of polemics or of sectarianism. Indeed, he urged, in a remarkable "Address to the Ministers of the Gospel of Every Denomination," published as early as 1788, that each sect should appoint a representative in a general convention of Christians, whose business shall be to unite in promoting the general objects of Christianity. He concludes: "America has taught the nations of Europe, by her example, to be free, and it is to be hoped she will soon teach them to govern themselves. Let her advance one step further and teach mankind that it is possible for Christians of different denominations to love each other and to unite in the advancement of their common interests. By the gradual operation of such natural means the kingdoms of this world are probably to become the kingdoms of the prince of righteousness and peace." It is true that to the end of his life Rush continued to be active in the cause of philanthropy, of education, and of religion; but we shall see that after the year 1789 his great work was purely medical. The almost incredible fact appears, then, that in twenty years up to that date, when he was but 46 years of age, he had already accomplished so much in public life, both political and medical; in professional work, as a teacher, as a writer and as a practitioner; in statesmanship, in philanthropy, in education and in social science, as to secure lasting fame as a thinker of power and originality, and as a writer and orator of high rank. But a no less remarkable, and probably to us the most interesting, period of his life was to follow. Sydenham died in 1689, and just 100 years later, in 1789, Rush was elected to the chair of the Theory and Practice of Medicine in the College of Philadelphia, to fill the vacancy caused by the death of Dr. John Morgan.[4]

When we consider how important he rendered that position, and what lustre his subsequent work reflected upon the medical profession and upon medical science, it is not unreasonable that we should take note of this Centennial Anniversary of an event of the greatest significance in the history of American medicine.

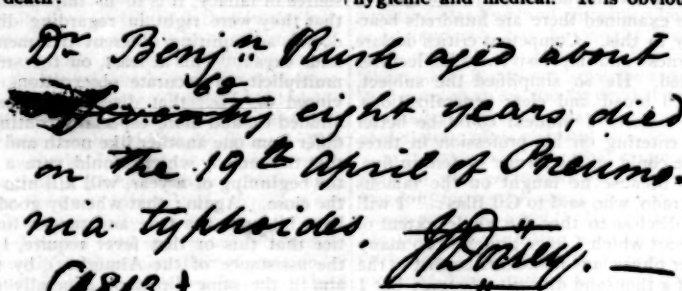
The air still vibrates with the national outburst of homage to the memory of the greatest of our heroes. The Centennial Anniversary of the Inauguration of Washington was fittingly made the occasion not only to illustrate our marvellous growth in power and prosperity, but to commemorate the character and services of that incomparable man. It may be that it was a thrill of sympathy with that fine retrospect, which made me feel that, in the discharge of the most difficult duty assigned to me to-day—of addressing this great audience representative of all branches of our profession in all sections of our land, it might not be amiss to select a topic which would remind us that for us members of the American medical profession this is an Anniversary year in an added sense.

The truth is that Rush was at all times and in all places and before all else a great physician. He had entered public life from a sense of patriotic duty; he had labored for the improvement of society because he was irresistibly impelled by his large humanity; but he threw himself into the service of medicine with passionate intensity. Ramsay, a favorite pupil and intimate friend, tells us that Rush wrote to him: "Medicine is my wife, science is my mistress, books are my companions, my study is my grave." As a matter of fact he married at the age of 32 years, and was so fortunate as to secure the hand of a woman whose character, charms and ability made their union a singularly happy one. At the close of his life, writing of the causes of insanity, he uses the following orthodox language: "Celibacy is a pleasant breakfast, a tolerable dinner, but a very bad supper. The supper is not only of a bad quality but, eaten alone, no wonder it sometimes becomes a predisposing cause of madness." Still we find him saying in 1808, in allusion to his

[4] In 1791, when the charter and estates were restored to the college, a reorganization was effected and the institution assumed the title of the University of Pennsylvania. Dr. Rush became the Professor of Institutes and of Clinical Medicine in the University. In 1797 he filled also the chair of Practice resigned by Dr. Kuhn in that year, though he appears not to have been formally elected to the latter position by the Trustees until 1805.

death: "When that time shall come, I shall relinquish many attractions to life, and among them a pleasure which to me has no equal in human pursuits. I mean that which I derived from studying, teaching and practicing medicine."[1]

Through the courtesy of Mr. Ferdinand J. Dreer I am enabled to reproduce here a facsimile of the certificate, given by Dr. Dorsey, as to the cause of Dr. Rush's death:



From 1789 to 1813 the history of Rush's work is largely the history of American medicine. We speak of the age of Sydenham, and date the origin of modern English medicine from it. So, if we limit ourselves to American medicine, may we speak of the age of Rush, and date from it our modern system of exact observation of symptoms, and strict attention to details of treatment both hygienic and medical. It is obvious that Rush was profoundly influenced by the genius of Sydenham in science, as he was by that of Franklin in philanthrophy. Sydenham was born in 1624; published his first important treatise in 1666, and died in 1689; and although Rush, when a student at Edinburgh under Cullen, was charmed with the teachings of that brilliant man, so soon as he began his independent observation he felt the trammels of artificial and cumbrous nosologies, and was attracted to the natural and scientific method of Sydenham, himself a true Baconian. Rush calls Sydenham his master in medicine, and loses no opportunity of proving by his writings his veneration for his genius and his example. When he came to choose a name for the country-seat which he so dearly loved as the only place where he found rest and tranquility, he called it Sydenham. Posterity, which Rush truly said is to the physician what the final judgment is to the Christian, has judged the pupil a worthy associate of the master, and has given Rush the title, which he would have regarded as the highest earth could bestow, of the American Sydenham. It is a sure sign of his essential greatness that the names chosen for comparison have been so illustrious. He was a Fothergill in the range of his scientific and human interests; he showed in his best work much of Sydenham's incomparable power of observation of the symptoms of disease and of appreciation of the indications for treatment. Rush enjoyed the immense advantage of living after Sydenham; but the latter had Hippocrates as master and exemplar. The special conditions under which great men do their work will always influence much its direction and its range. But the essential qualities of greatness, the rare note of genius; the power of infinite labor; the close touch with nature and with truth—such marks distinguish the work of men like these in whatever field and

[1] The following account of Dr. Rush's death, in 1813, is copied from the original letter of his widow to Dr. Mease:

Dear Sir:—Agreeably to your request I have committed to paper all that I think important in the progress of the disease of our dear and ever to be lamented friend. You can make any alteration in the order or words you think proper, and make such use of it as will answer the object you have in view. Yours with great regard,

JULIA RUSH.

Friday, December 8, 1815.

"At 9 o'clock on the evening of Wednesday, the 14th of April Dr. Rush (after having been as well as usual through the day) complained of chilliness and general indisposition, and said he would go to bed. While his room was preparing and a fire making he became so cold that he called for some brandy, which he immediately swallowed, then went to his room, soaked his feet and got into a warm bed and took some hot drink. A fever soon came on, attended with great pains in his limbs and in his side. He passed a restless night, but after daylight a perspiration came on, and all the pains were relieved except that in his side, which became more acute. He sent for a bleeder, who took 10 ozs. of blood from his arm; this gave him great relief. At 10 o'clock Dr. Dorsey saw him, heard what had been done and approved of it, observed that his pulse was calm but rather weak, and advised him to drink plentifully of wine whey, which was immediately given to him. He remained the rest of the day and on Friday with but little apparent disease, though never quite free from fever, and always complaining of the pain in his side when he tried to take a long breath. On the morning of Saturday he awoke with an acute pain in his side, and desired that the bleeder might be sent for. To this I objected, on account of the weak state of his pulse. I purposed to send for Dr. Dorsey, but Dr. Rush would not consent to the doctor's being disturbed, but was anxious to lose blood. He reminded me that he had a cough all winter and said, 'This disease is taking hold of my lungs, and I shall go off in a consumption.' I thought less risk would be run in waiting a few hours than in suffering him to be bled without the advice of his physician. At 8 o'clock Dr. Dorsey saw him, but upon feeling his pulse objected to his losing blood, and called in Dr. Physick, who agreed in the opinion that bleeding was improper, and it was not done. The pain in the side continuing and his breathing becoming more difficult, Dr. Physick consented to his losing 3 ozs. of blood from his side by cups. This operation relieved him so that he fell into a refreshing sleep, and towards the evening of Saturday his fever went off and he passed a comfortable night, and on Sunday morning seemed free from disease. When Dr. Physick saw him he told me he was doing well, that nothing appeared now necessary but to give him as much nourishment as he could take. He drank porter and water, and conversed with strength and sprightliness, believing that he was getting well, till about 4 in the afternoon, when his fever came on again, but in a moderate degree. At 5 his physicians saw him and found him not so well as in the morning, but not appearing to apprehend what so soon followed, for at that time nothing was ordered different from the morning. At 9 o'clock they saw him again, when they found him so low as to threaten the most fatal termination to his disease. Stimulants of the strongest kind were then administered; you, my friend, know with how little effect."

to whatever extent they have worked. Close comparison is impossible; it is enough to recognize that they belong to the small group of Nature's most gifted children.

We may judge of Rush's excellence as a teacher, and of the influence which he exerted on his age, by the testimony of his pupils. From all parts of America, students resorted to Philadelphia to profit by his instructions. In the mass of letters I have examined there are hundreds bearing testimony to this. Competent critics declare that for clearness and impressiveness his lectures were unrivaled. He so simplified the subject, presented such broad and clear generalizations, that Ramsay asserts a student could be better prepared for entering on his profession in three years, than he could on the former system in five. This was not because he taught on the famous plan of Sangrado, who said to Gil Blas: "I will immediately disclose to thee the whole extent of that salutary art which I have professed so many years. Other physicians make this consist in the knowledge of a thousand difficult sciences; but I intend to go a shorter way to work, and spare thee the trouble of studying pharmacy, anatomy, botany and physics; know, my friend, all that is required is to bleed the patients and to make them drink warm water." Far from it. He was, indeed, the earliest and strongest advocate for a high standard of medical education, as has been forcibly shown by one of our ablest scholars, himself a successor of Rush and a former President of this Association.[6] I know that malignant envy started and apathetic credulity has perpetuated the false opinion that Rush's method of cure was equally sanguinary. I know that, as will always happen to impressive teachers, there were students of Rush who carried away recollections of his vigorous treatment in certain cases, without an appreciation of the special indications present, nor of the reasoning which forbade similar measures in other cases apparently analogous, but to the trained judgment widely distinct. Of one of his students I was told by an old friend that she remembered vividly how on every visit of the doctor some blood was shed; and that, on one occasion, as he entered, her mother remarked that one of the children had a bad cold and added, "Of course I shall send for the bowl." Upon which the physician rejoined, justly incensed at this suggestion of mere routine on his part: "Not *of course*—you shall not send for the bowl *of course;* but ——— may fetch the bowl;" and bled the child was with unusual freedom.

I hold it to be absolutely impossible for us of to-day to pronounce adversely upon the merits of the treatment of Sydenham or even of the more modern Rush. In the first place, the entire subject is dominated by our more exact methods of diagnosis,' and by our larger knowledge of the natural history of diseases. It is evident that even those skilful observers were often misled, and treated local diseases as continued or malarial fevers, and attributed to their treatment changes which were essential to the course of the disease. But again, granting the largest share to this source of fallacy, it is to us impossible to doubt that they were right in regarding different epidemics as requiring different treatment. Sydenham' says: "This at least, on the strength of a multiplicity of accurate observations, I am convinced of, viz., that diseases of the character alluded to, and more especially continued fevers, differ from one another like north and south, and that the remedy which would cure a patient at the beginning of a year, will kill him perhaps at the close. Again; that when by good fortune, I have hit upon the true and proper line of practice that this or that fever require, I can (with the assistance of the Almighty), by taking my aim in the same direction, generally succeed in my results, respect being always had to the age and temperament of the patient, and to the other matters of the same sort. This lasts until the first form of epidemic becomes extinct, and until a fresh one sets in. Then I am again in a quandary, and am puzzled to think how I can give relief. And now, unless I use exceeding caution, and unless I exert the full energies of my mind, it is as much as (nay, it is more than) I can do to avoid risking the lives of one or two of the first who apply to me as patients; at length, however, I steadily investigate the disease, I comprehend its character, and I proceed straight ahead, and in full confidence towards its annihilation." Thus when he writes of the continued fever of 1661 to 1664, he says: "Whenever the state of the blood is of such description as I find it amongst youths of an athletic habit and a sanguine temperament, venesection is my leading remedy. Except in certain cases, it can not with safety be admitted. Neglect it, and you run the risk of frenzies, pleurisies and such like inflammations, which originate in the preternatural ebullition of the blood. More than this, —from the excess of the blood the circulation is impeded. You smother it. As to the quantity, it is my practice to take away just so much blood as I consider will relieve the patient of the distress, to which the violent commotion makes him liable." Yet in these same epidemics he states that when he has to do with a patient whose blood is in itself of a weak character, he keeps his fingers off the lancet. And when he discusses the pestilential fever of 1665-66 he asserts that he found an adequate substitute for venesection in profuse diaphoresis.

It appears that Rush actually bled more systematically than Sydenham. Ramsay says: "In a

[6] Alfred Stillé, M.D. Medical Education in the United States, 1846. Dr. Stillé held from 1864 to 1884 the chair formerly filled by Rush.

review of the improvements made by Dr. Rush, it appears that a free use of the lancet, in almost every case, and particularly in some in which it had rarely or never before been used, was one of his first and most common prescriptions." A careful study of Sydenham, to omit entirely such famous bleeders as Botallus, scarcely supports the former part of this statement, where frequent venesection is spoken of as an improvement introduced by Rush. Certain it is that in the later epidemics which Rush records he thought bleeding was less urgently indicated. Equally certain it is that in treating fevers he conjoins with venesection, the scientific external use of cold water, and a rigidly careful prescription of the diet. Finally, let it be remembered that the fame of Rush and of his methods of treatment in fevers, must, whether for good or for bad, be based chiefly upon his course in the great epidemic of 1793. Let any one who desires to fully appreciate this great man: nay—I would even say let any who desires to appreciate the highest elevation of emotion, of thought, and of action which can be maintained continuously throughout weeks and months—read and re-read Rush's account of this epidemic. It was published in 1796 when the events were fresh in the minds of all. It at once took the place which it has maintained as the best—or if not the very best, as one of the half-dozen best histories ever published of epidemic diseases. There is scarcely needed the extraordinary "narrative of his state of body and mind during the prevalence of the fever"—a narrative which Richardson describes as a ghostly whispering, through a veil of nine-tenths of a century—to reveal the man's inmost nature and thoughts during this terrible ordeal. He may have erred in his conclusions as to the effects of the evacuant treatment. The evidence in its favor is not his alone; some of the ablest of his colleagues endorsed his statements; his pupils, who were his assistants, said, "we cure all we are called to on the first day." Of course the exalted and exhausted state of mind shared by all the physicians who remained at their post, or whose lives were spared, was not favorable to the exercise of cool judgment; yet the record which Rush has given us is so replete with minute and accurate observations evidently made at the moment and at the bedside, that one finds it difficult to distrust his opinion as to the effect of bleeding and purging when used at the very earliest hour of the attack.

It is impossible to avoid a certain enthusiastic sympathy with Rush as we read his account of his labors and sufferings. For upwards of six weeks he did not taste animal food or fermented liquor; he abandoned all precautions, and rested himself on the bedside of his patient, and drank milk and ate fruit in their sick rooms; he visited over a hundred fever patients daily, and his house was filled with the poor whose blood, from want of a sufficient number of bowls, was often allowed to flow upon the ground; he lost his sister who had refused to leave him, and within an hour of her death he was in his chaise driving to visit his patients; he was ill himself, but recovered after repeated bleeding and purging; he was villified and slandered, but he fought his professional rivals with his pen as he did the fever with his lancet; and it was not until the epidemic was on the wane that he finally yielded to the disease and had a dangerous attack from which he recovered slowly, after plentiful bleedings.

In the plague of 1665, Sydenham acknowledges that he was persuaded by his friends to leave London, for, as he says, "*Tua res agitur paries quum proximus ardet.*" He returned earlier than his neighbor, however, and finding the disease still raging, he preferred experience to theory and bled freely and as he thought successfully. But Rush quaintly records: "It pleased God to enable me to reply to one of the letters that urged my retreat from the city," that "I had resolved to stick to my principles, my practice and my patients, to the last extremity."

Other physicians showed the same heroism, but he was the acknowledged leader, and it was their sincere conviction that a battle was being waged for a principle of vastly more importance than the fate of any one community. Rush began to treat the fever upon a stimulating plan; his failure led him to try diaphoretics, and later to use the cold bath as a febrifuge. Finding that no good followed; he was led to believe that the debility was apparent, and resulted from an oppression of the system, and he consequently began an evacuant plan of treatment, which he rapidly developed into a method for abstracting excess of stimulus from the system by means of *purges*, *blood-letting*, *cool air*, *cold drinks*, *low diet*, and *application of cold water to the body*. He asserts that the change of result was immediate; so that within a short time and during the height of the epidemic he could record in his note-book: "Thank God! out of one hundred patients, whom I have visited or prescribed for this day, I have lost none." Well might he add: "Never before did I experience such sublime joy as I now felt in contemplating the success of my remedies. It repaid me for all the toils and studies of my life. The conquest of this formidable disease was not the effect of accident, nor of the application of a single remedy; it was the triumph of a principle in medicine."

No conqueror could feel greater triumph when the crown of a vanquished empire was placed on his head; no explorer more delight at the sight of a new and long sought continent.

[7] See works of Sydenham, Sydenham Soc. Ed., i, p. 163, for an example of this.

[8] Medical Observation, Sydenham Soc. Ed., Vol. 1, chap. 9, p. 33.

"Then felt he like some watcher of the skies
When a new planet swims into his ken;
Or, like stout Cortez, when with eagle eyes
He stared at the Pacific, and all his men,
Gazed at each other with a wild surmise
Silent, upon a peak in Darien."

It is well for us who toil in paths which lead to little of worldly renown or glory to be reminded that to the faithful students of Nature and of Science there may come such moments of fruition and of sublime joy.

I repeat, then, that it seems to me difficult to believe that in certain fever epidemics, and when used with strict regard to the constitution of the patient, and when used in the forming stage of the disease, bleeding, as used by Sydenham and Rush, may not be at times beneficial. Occasion stays for no man. I am afraid that in our day of refined diagnosis it not rarely happens that the chance of effective interference in acute disease is lost while we examine the secretions and the record of temperature and search the blood. Sydenham wisely said: "I well know that the chance of a patient's death or recovery depends chiefly, if not wholly, upon the treatment of the first few days."

Once more, the statistical method, which has done such good service in checking perturbative treatment and in determining the natural history of diseases, was unknown in the days of Rush. It would have been impossible, with the faulty diagnosis of that time. For indeed we are learning, that many of the conclusions based upon it during the past fifty years are inconclusive in the light of the more exact differential diagnosis of to-day. We shall never again bleed for the name of a disease. Neither Sydenham nor Rush did that, though their less wise imitators did. But we shall learn to appreciate the dynamics of the system so accurately that, even when the disease is due to specific microbes or to poisonous ptomaines, we may possibly be able to relieve urgent symptoms and avert serious complications by timely moderate venesection. In all infectious disease, from scarlatina to tuberculosis, it is a question both of the soil and of the specific poison, and the symptoms and course of the disease are not simply the life-history of the microbe, but they are also the expression of the reaction of the system and of the secondary disturbances of function.

And lastly, let us remember the marvellous wealth of our resources as contrasted with theirs. We can produce startling therapeutic effects with precision and ease. Organic chemistry is daily giving us new agents of tremendous power. We are surely able to produce some of the results formerly attained by bleeding and by purging, by means less inconvenient and possibly less hazardous; but we may be assured that in this abundant wealth of remedies and in this facility of administration lie grave dangers. Let any one who would learn how a master of our art gained his skill in using his tools note carefully the utterances of Sydenham on the indications for opium in different diseases: "To know it only as a means of procuring sleep, or of allaying pain, or of checking diarrhœa, is to know it only by halves. Like a Delphic sword, it can be used for many purposes besides. Of cordials it is the best that has hitherto been discovered in nature. I had nearly said it was the only one." Sydenham and Rush had a few remedies which their long experience and minute observation taught them to use skilfully for the relief of many symptoms. We have many remedies for every symptom, and I fear that few of us devote enough scrupulous care and patient study to learn thoroughly the varied powers and applications of any of them. So this seems not only a good apology for the former use of bleeding, but a needed warning to us as to the careful and skilful use of our new weapons against disease, and a forcible suggestion that we may have erred in so completely abandoning remedies which had been so long and carefully tested, and so highly approved.

We have seen that Rush believed in principles in medicine. He did more—he gloried in these principles, and he wished his only epitaph to be that he had taught them. And in no way are the independent character and the intellectual vigor and originality of the man more strikingly shown than in his attempts to reduce the infinitely complex phenomena of disease within the compass of a simple but comprehensive system. "Rush," says the distinguished English physician, Lettsom, with whom originated the title of the American Sydenham, "approached, if not exceeded, Sydenham in grandeur and compass of thought, though less discriminating in that felicitous arrangement of medical phenomena which distinguished Sydenham, whilst his theories were less consonant with nature. To Sydenham the motto *Conamen naturæ* is most applicable; to Rush, *Nullius in verba*." I make this quotation with no notion of attempting the difficult and unwise task of a judicial comparison of these two great physicians, but because such expressions may help us to form a clearer estimate of the special merits of each. Full of interest also, from this point of view, is the appreciative and critical summary of Sydenham's great life work by his most distinguished editor and biographer, Latham; "for he had recognized, what is now an old truth, what was then a new one, and what is always a great one, the entire supremacy of direct observation. He was one of the earliest to see and apply the true induction of medicine, while in the powers of observation, of analysis and of comparison he was subtle among the subtle, and accurate among the accurate. For practice these were all that Sydenham required; for the development of a system he wanted also the reduction of his

observations, both on disease and treatment, to laws more or less general. The intellectual powers here requisite were less, undoubtedly, the peculiar powers of Sydenham's mind, than the powers of observation, analysis and comparison."

It goes without saying that any theories constructed in those days, or in the time of Rush, could have been provisional only, owing to the want of instruments of precision to register exact observations, and the want of accurate differential diagnosis. It will suffice, however, that we read carefully the volume of Rush's medical inquiries to be convinced that we are in the presence of a scientific spirit of rare scope and power. It is easy to pick out instances of theorizing pushed beyond legitimate bounds, and of practice based on such theories carried beyond the limits of safety, as we now can define them. All are familiar with the oft-quoted advocacy of bleeding in pulmonary consumption; but all have not taken pains to study the original, where they could see that Rush's views on the treatment of this disease were far in advance of those of his contemporaries, and, indeed, were in harmony with much of the best thought of the present day. So far from advocating depletion and confinement to stove-heated rooms, he says himself:[9] "Bloodletting has often relieved consumption, but it has been only by removing the troublesome symptoms of inflammatory diathesis, and thereby enabling the patient to use exercise or labor with advantage." Again (id. loc.): "We shall not be surprised to hear of physicians, instead of prescribing any one or all of the medicines formerly enumerated for consumption, ordering their patients to exchange the amusements or indolence of a city for the toils of a country life; or of their recommending not so much the exercise of a passive sea voyage, as the active labors and dangers of a common sailor. . . . . I shall only add that if there does exist in nature such a medicine (as to supply in any degree the place of the labors or exercises), I am disposed to believe it will be found in the class of tonics."

More than enough has been said, I am confident, to vindicate the lofty claims made for Rush as the high-spirited patriot, the wise and far-seeing reformer and philanthropist, the eloquent teacher and writer, and, above all, as the founder of scientific medicine in America, keen and indefatigable in investigation, brilliant and vigorous in generalization, faithful and sagacious in the application of his principles in practice. This imperishable fame is fairly his; his splendid example he has bequeathed to us. Is it not our duty, shall it not be our pride, to rear in enduring form a fitting memorial of our gratitude?

9 Medical Inquiries and Observations, 2d ed., 1796, Vol. i, p. 199.

ORIGINAL ARTICLES.

INCOMPLETE INWARD DISLOCATION OF THE RADIUS AND ULNA AT THE ELBOW.

Read by Title in the Section of Surgery and Anatomy, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

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Some writers who have devoted especial attention to the subject of lateral dislocations of the forearm have had an unusually large experience. But there are many able surgeons whose experience appears to be quite limited in this respect. Pitha, for instance, whom Bardeleben quotes as a surgeon of large experience, met with only two cases of inward dislocation. The literature of this country and Great Britian appears to be particularly deficient in any special reports on this form of dislocation. Aside from the descriptions in the text books of the inward dislocation, which in most cases are very meagre, very few reports of cases could be found. The scarcity of reported cases of this kind in American literature may be due to the fact that but few cases have been observed in this country, or the true nature of the dislocation was not recognized, or there may be some who have failed to reduce the dislocation, and therefore refrained from reporting their cases; and on the other hand, some, who may have reduced the dislocation without much difficulty, may not have regarded their cases of sufficient importance for publication. Under these circumstances it appears desirable that cases, whether reduced or not, should be reported and the literature reviewed.

When the upper end of the ulna has been pushed to the inward side of the lower end of the humerus, so that its greater sigmoid cavity embraces the epitrochlea, and the head of the radius following the ulna is under the trochlea, we have the incomplete inward dislocation of the forearm, or of the radius and ulna at the elbow. Both the radius and the ulna are dislocated completely when considered singly. The greater sigmoid cavity of the ulna has been completely separated from its former opposite articulating surface, the trochlea; as has also the head of the radius been entirely separated from its opposite articulating surface, the capitellum of the humerus. But viewing the upper and lower articulating surface of the elbow joint, each in its entirety, the dislocation is incomplete, because the outer portion of the surface, the radius, remains in contact with the inner portion of the articulating surface of the lower end of the humerus. Another reason for applying the term incomplete to this form of dislocation, is to distinguish it from that form where the bones of the forearm are displaced so far inwards, that the radius looses all connection

with the articulating surface of the lower end of the humerus. It should be stated, however, that this complete inward dislocation is merely theoretical, as no case can be found recorded.

Descriptions of subdivisions of this dislocation have been attempted, but none have been sufficiently characteristic to be generally accepted. Denucé speaks of a possible dislocation in which the sigmoid cavity of the ulna embraces the inner border of the trochlea, but says this form is hardly possible. The inner border of the trochlea has a relatively much larger circumference than the middle portion, and it would probable require very little force to reduce the dislocated ulna, or to push it inwards to such a degree that the sigmoid cavity entirely leaves the trochlea. Moreover, this is all the more probable when it is remembered that there is a ridge in the centre of the sigmoid cavity running parallel to the long axis of the ulna, from which the surface declines to each side, or, in other words, the sigmoid cavity presents a convex surface in the transverse lines. This convex surface would not likely remain on the sharp inner edge of the trochlea unless some unusal impediment prevented it from slipping to one or the other side. There is one case described by Sprengel, in which this position of the bones was demonstrated by resection of the anchylosed elbow joint seven months after receiving the injury. In this case only a part of the inner portion of the greater sigmoid cavity projected beyond the inner edge of the trochlea. But on the free surface of the sigmoid cavity a small piece of bone was found attached by fibrous tissue, which proved to be the severed point of the epitrochlea. In some cases the head of the radius is forward or posterior to the ulna, and subdivisions of radio-posterior and radio-anterior variety have been suggested. This displacement is not usually very marked. In some reports of cases it is stated that the head of the radius could best be felt at the anterior, others at the posterior surface of the joint; but most of the reports contain no note of this.

Case.—N. S., æt. 3½ years, on April 8, 1885, fell on the floor while running with a doll in her hand—she fell on the forearm and hand while holding the doll.

When I examined the child I found considerable swelling at the elbow joint. The arm was held in a slightly flexed position, the hand pronated moderately. Flexion and extension, though somewhat painful, could be made without much difficulty; supination and pronation the same. No shortening of the arm could be detected. There was no crepitation. The swelling interfered considerably in making a careful examination, but no displacement of the bones could be detected. The absence of crepitation, the freedom of motion, and the absence of any very marked deformity led me to think that there was not much more than a laceration of the deep soft structures of the joint or its surroundings, but a positive diagnosis was reserved for a later time when the swelling had subsided.

Several days after receiving the injury, when the swelling had disappeared, a careful examination was again made, and now it was evident that the radius and ulna were displaced to the inward (ulnar) side. The external condyle was very prominent. The head of the radius could not be felt at its usual place under the capitellum. The olecranon could not be felt in its fossa, but was found behind and above the epitrochlea. The head of the radius could now be felt with some difficulty under the trochlea. Passive motion was still somewhat painful but good. An anæsthetic was given and reduction attempted, but failed after repeated efforts. This was followed by swelling and tenderness of the joint.

Four or five days later, after the swelling was again reduced, another attempt was made to reduce the luxation while the patient was completely under the influence of an anæsthetic. This time I was assisted by Drs. Hoge, Wilson and Bates, Jr. Various methods were tried. Extension and counter extension with lateral pressure on the displaced bones while the forearm was in different stages of flexion, and in complete extension was tried, but failed. Forced lateral inward flexion, so as to hook the olecranon in its fossa, followed by hyper-extension and outward flexion to lift the coronoid process over the inner edge of the trochlea was also tried. The joint was very lax, and it appeared as if reduction could certainly be accomplished. But the persistent efforts by myself and the gentleman present, and according to various methods suggested, having failed, the attempts to reduce the dislocation were abandoned. The violence done to the joint at this attempted reduction was followed by very much swelling and discoloration of the elbow and entire forearm. This gradually disappeared and instructions were given to continue passive motion.

March, 1889. Four years after receiving the injury the dislocated elbow was again examined. The displacement of the bones is the same as described above. There is no shortening of the arm. The diameter of the joint is about the same as that of the uninjured arm. When the arm is held in an extended position, the hand being supinated, the lower end of the axis of the forearm is deflected inwards, so much so that the axis of the arm forms an angle with the axis of the forearm, the concavity of which is on the inner side of the arm, instead of the outer side as on the uninjured side. Active flexion, extension, supination and pronation is about as perfect as with the left arm.

Cause.—Some few cases of this form of injury are reported where the patient fell on the elbow,

but in most cases it is stated that the patient fell on the outstretched hand. A second factor, however, seems to be necessary to displace the articulating surfaces of the elbow joint. It is generally accepted by those who have written on the subject, that this second factor is a forced rotation inwards of the forearm. Forced lateral flexion, to the external side, sufficient to rupture the internal lateral ligament followed by a slight torsion of the forearm, may also cause this dislocation. Hamilton reports a case observed by Squier resulting from a fall from a pile of boards, the right arm was caught between the boards, and the child turned a somersault while falling. Pitha reports a case of a boy who fell on his back with the forearm under the same. Denucé reports a case of a lady who was thrown from a carriage, she fell on her hand, the arm being extended. The carriage wheel passed over it obliquely from without inwards, and from behind forwards upon the outside of the elbow immediately below the articulation. In the case of Reid, a gamekeeper while wrestling, "was thrown upon his left elbow whilst it was in a semi-bent position." Prewitt reports the case of a girl, æt. 5, who, while "swinging upon a trapeze, holding the crossbars with her hands, was pushed by a boy so as to swing up several feet when she lost her hold, and fell upon her right elbow." The last two are the only cases I could find in the literature, where from the description there can hardly be any doubt that the injury was received by a fall upon the elbow.

Pathology.—Pitha and Denucé have shown that the incomplete inward dislocation of the forearm can be produced without much difficulty on the cadaver. The experiments of both show that rupture of the lateral ligaments, particularly the internal ligament, is necessary to bring about the dislocation. Rupture of the capsule alone in its anterior or posterior portion, will not permit the lateral dislocation if the internal lateral ligament is not severed. The inner ligament can be ruptured by making forced external lateral flexion, then slight hyper-extension with lateral pressure at the joint, or better still, forced pronation will carry the coronoid process and olecranon over the inner border of the trochlea. After dissection of the dislocated joint as produced upon the cadaver, Denucé usually found both lateral ligaments ruptured, the anterior and posterior ligaments lacerated, the annular ligament was ruptured sometimes. The ulnar nerve was found contused in some experiments.

Broca has described the results of a dissection of what was evidently an old case of incomplete inward dislocation. He says: "No traces of the lateral or of the annular ligaments were found. A sort of fibrous capsule of recent formation, adherent to the deep surfaces of the muscles, united the inferior extremity of the humerus to the head of the radius, and the latter to the superior extremity of the ulna." Jolivet reports having found three pathological ligaments in a dissected specimen: "1. A ligament extending from the articular depression on the head of the radius to the posterior inferior part of external articular half of the trochlea. 2. A ligament from the articular cavity of the coronoid process to the epitrochlea. 3. A ligament extending from the posterior and internal border of the epicondyle to the superior part of the external border of the olecranon. The latter was more considerable than the others and triangular in form."

Frequency.—Of twenty-seven cases of incomplete inward dislocation at the elbow found in the literature of the subject, where the side of the injury is mentioned, fourteen were on the left side and thirteen on the right side. Of thirty-one cases where the sex is given, twenty-one were males and ten were females.

Hahn was probably the first to show that this dislocation occurs most frequently during childhood. He had an unusually large experience having met with twenty-one cases, of which eighteen were below 15 years old and only three above that age. Of thirty-one cases reported, including those of Hahn, twenty-three were from 2 to 15 years old, and eight were adults. If to this number I add my own case, it will appear that nearly 78 per cent. occurred during childhood.

Comparing the incomplete inward dislocation with other dislocations at the elbow, the following data were obtained. Hahn met with twenty-seven backward dislocations to twenty-one incomplete inward dislocations, showing that in his experience the latter dislocation is almost as frequent as the former. Of his twenty-seven backward dislocations fourteen were adults and thirteen children. Sprengel found thirty-two cases of lateral (including outward as well as inward) dislocations of the elbow on record in the surgical clinic at Halle (Volkmann) during the years 1873 to 1879. Of this number twenty were inward dislocations and twelve outward. Of the thirty-two cases twenty-eight occurred in children and four in adults.

Symptoms.—The forearm is usually slightly flexed on the arm, and the hand is in a position of slight pronation to extreme pronation. I failed to find any case reported where the hand was supinated as reported in some text-books. The one case of Pitha and two of Denucé are reported to have been in extreme pronation. There is no marked shortening of the arm. A slight shortening may be found along the inner (ulnar) side of the arm, the epitrochlea with which the ulna now articulates being placed somewhat higher than the trochlea. This relative position of the epitrochlea and the trochlea

also causes a deflection of the lower end of the forearm inwards. The transverse diameter of the joint may be increased by a few lines but not more, as the inner edge of the sigmoid cavity does not project much, if any, beyond the point of the epitrochlea. Passive motion is usually resisted by the patient in consequence of the pain, but when put under the influence of an anæsthetic it is as free as in the uninjured joint. The external condyle is very prominent. The head of the radius cannot be felt in its place under the capitellum of the humerus. The olecranon fossa is found empty, and below it the head of the radius may be found articulating with the trochlea. The head of the radius can sometimes be felt anteriorly instead of on the posterior side of the joint. The olecranon is felt behind and above the epitrochlea, and the coronoid process in front of the same bony prominence. The tendon of the triceps muscle following the olecranon deviates to the ulnar side of the arm.

Diagnosis.—There is no difficulty in making the diagnosis of old cases of incomplete inward dislocation of the forearm, and this accounts for the fact that many writers who have seen only old cases, report that the diagnosis can be readily made. In recent cases and especially in children, I believe the diagnosis is by no means easy. Hahn, with his large experience, says, that the first five cases occurring in his practice were not recognized until after some time. Of the twenty cases mentioned by Sprengel, eleven cases were old dislocations when brought to Volkmann's clinic. This must be due to one of two causes: either the true nature of the injury was not discovered, or, if a proper diagnosis was made, reduction could not be accomplished. Nine of Hahn's cases were old dislocations when first seen by him. Pitha expresses the view that this dislocation is frequently overlooked. Sprengel says, in most cases of this injury the proper diagnosis is not made. In the case reported by Prewitt, the nature of the injury could not be determined while the limb was swollen, and after this swelling subsided, it was supposed that a fracture had occurred about the elbow joint. Five weeks after the accident Prewitt examined the child and made a correct diagnosis.

In children, where the bony prominences are not very marked, where the adipose tissue is usually well developed and the soft tissues permit rapid swelling, the dislocation is easily overlooked. The comparative freedom of motion with no marked shortening of the arm or other gross deformity is liable to mislead the observer. The absence of the head of the radius from its position under the capitellum of the humerus may not be noticed, as this part of the radius cannot be felt very readily when the elbow of a child is swollen. The swelling may also prevent the detection of the absence of the olecranon from its fossa, and the displaced olecranon may be mistaken for the epitrochlea.

The deviation of the lower end of the axis of the forearm inwards, so that this axis is a continuation of that of the humerus, or even diverges so far inwards, that it forms an angle with the axis of the humerus opposite to that of the normal arm, is, I think, an important diagnostic sign, when the diagnosis of fracture has been eliminated. This deviation is best seen when both arms are extended forward and the hands are supinated. The relation of the olecranon to the epitrochlea and epicondyle should also be examined very carefully. To avoid mistaking the displaced olecranon for the epitrochlea, place the finger upon the posterior surface of the ulna, at such a part where there is no swelling, and follow this surface carefully upwards until the olecranon is reached, then make flexion and extension of the forearm to see if it moves with the forearm. After being certain that the finger is on the olecranon, ascertain its relation to the epitrochlea and epicondyle, and make comparisons of this relation at the uninjured limb.

This dislocation has been diagnosed a number of times as fracture. The soft cartilagenous crepitation, which is observed sometimes in recent cases, has probably led to this error. This mistake should be carefully guarded against, as the application of a splint may cause anchylosis of the joint, when otherwise, motion would probably be fairly good and the limb quite serviceable.

Prognosis.—While it is highly probable that this luxation has been frequently mistaken for other forms of injury, yet in view of the large number of old dislocations it is fair to assume, that some of the dislocations were properly recognized, but that reduction could not be accomplished. There may be some self-satisfaction to a writer of a book on surgery to announce *ex cathedra* that "reduction is easy," but it is not instructive to the practitioner who perchance is unfortunate enough to meet with such a case. Such statements tend to prevent the physician, who has failed to reduce the dislocation from publishing his case. Pitha in his report of a case, a child 7 years old, says he was surprised at the difficulty he met with in making reduction. Denucé reports a case of Debruyn in which reduction was not accomplished without difficulty. The same author reports a case observed by Triquiet where a number of attempts were required to reduce the dislocation. Hamilton says that Malgaigne was unable to reduce the dislocation in a recent case. Wright has reported a rare case of dislocation where the ulna alone was displaced inwards, the radius remaining in its normal position. After repeated attempts he was unable to reduce the dislocation, he says:

"the fact that we were unable to reduce the dislocation after such prolonged trial was to me a matter of great surprise as well as disappointment, because the joint was exceedingly lax, and the olecranon was freely movable." Prewitt could not accomplish reduction in his case five weeks after the accident. In old cases of this dislocation reduction is rarely successfully made. Sprengel reports one reduction in a case of eight weeks standing. This is the only one of the eleven old dislocations observed in Volkmann's clinic.

After the luxation has been reduced, motion, after a short time, will usually be good. Pitha found it necessary to break up some adhesions which occurred after reduction; but this case was complicated by a fracture of the epitrochlea. Of one case reported by Denucé it is said: "power of motion never returned." When the dislocation has not been reduced there will in time be fairly good motion, and a very serviceable limb will be had, especially if passive motion is persistently practiced.

Treatment.—The method most commonly adopted to reduce an incomplete inward dislocation at the elbow, is to make traction on the forearm, the arm being counter-extended; at the same time lateral pressure is made at the joint in such a manner that the lower end of the humerus is pushed inwards, while the upper ends of the radius and ulna are pushed outwards. This method proved successful in the case of Pitha, also in the case of Triquiet reported by Denucé, and also in the cases reduced by Hahn. While traction is made the forearm should, according to Hahn, be in the position of strong extension, and according to Triquiet in extension and supination. The method described by Sprengel and which has been successful at Volkmann's clinic, is not very lucid in expression. He says: "The arm is bent (kinked) laterally in such a manner that the existing dislocation is increased, then a movement is made in the opposite direction while direct pressure is made." Stimson says, that "theoretically, outward lateral flexion combined with moderate traction and followed by direct pressure ought to effect reduction readily."

The difficulty is that the inner edge of the trochlea describes a circle with a larger radius than the circle described by the middle and smaller portion of the sigmoid cavity, furthermore, the sigmoid cavity describes more than a half-circle, thus leaving a comparatively small open space for the entrance of the trochlea. From measurements on an adult skeleton I find that in sliding the bones into their normal position there will be a distance of three-eighths of an inch between the middle portion of the sigmoid cavity and the opposing surface of the inner edge of the trochlea. This indicates that sufficient traction must be made to draw the ulna three-eighths of an inch farther from the humerus than when it is in its natural position. This space cannot be avoided except by such extreme lateral flexion as is impracticable, because of the danger of injuring other tissues around the joint.

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CLINICAL NOTES.

Read in the Section of Laryngology and Otology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY J. D. ARNOLD, A.M., M.D.,

SURGEON TO THE SAN FRANCISCO POLICLINIC.

Early in May I was in receipt of a letter from Dr. Fletcher Ingals, which contained a request that I prepare a paper for this meeting of the American Medical Association. Sensible of the honor conferred in the request, I replied that my time was so taken up that I was unable to engage for anything that might require elaborate preparation, but would be glad to read the notes of a few interesting cases, if in his opinion they would answer for such an occasion. This is at once my reason and excuse for offering the following paper which is an unelaborated description taken from my case book, with only so much comment as is needful to elucidate the narrative.

Case 1. Adeno-Carcinoma of the Larynx.—Patient a man, æt. 38, occupation car-driver. About seven months ago took severe cold after unusual exposure on a rainy night. Quit work for five days, at the end of which time he felt quite well, but the voice remained somewhat hoarse. Used many patent medicines, and finally consulted a physician. Patient denied all history of syphilis, but after a series of in-

halations was put upon mercurial inunction and pot. iodide. During all this time the hoarseness increased, and dyspnœa and dysphagia made their appearance. There had never been any pain in the throat, and very little cough. On October 3, 1888, I saw patient for the first time. He speaks in a toneless whisper; breathing loud and labored. Examination with the mirror disclosed the cavum of the larynx, almost filled with what appeared to be a mass of papillomata. Nothing could be seen of the structures of the larynx except the superior margin of the epiglottis. The growth projected into the pharynx and rested against its posterior wall: (it was of a grayish color and was distinctly fibrillated.) I could not detect the chink through which respiration was carried on. The man's dyspnœa made him urgent for immediate relief. Accordingly after free use of cocaine spray (10 per cent.) I removed with the Mackenzie antero-posterior forceps a piece of the growth about as large as a medium sized almond. I had to use considerable force to tear it away, and the procedure brought on an attack of suffocative cough which lasted so long that I feared an instant tracheotomy would be necessary. He came around all right, however, and expressed himself as highly gratified at the greatly increased freedom of respiration; voice remained as before. Inspection showed that the removal of the portion of the tumor had exposed to view the right artyenoid. That same day I sent the growth to Dr. Douglass Montgomery for microscopical examination. He reported that it was a simple papilloma. On October 6, 9, 14, and 27, I removed other portions of the tumor aggregating in all 146 grains in weight; and all agreeing in naked eye appearance with the piece first examined. Breathing had now become easy and noiseless, and the voice was markedly improved. On November 6, I removed a large mass which was much more dense than the former pieces; which lacked the fibrillated structure, and which was followed by considerable bleeding. This was also sent to Dr. Montgomery who reported that it was clearly an adeno-carcinoma. After this I refrained from any further endo-laryngeal operation, and advised the patient of the fact that his disease was malignant. He could not understand why the operations which had helped him so much should be discontinued and refused the tracheotomy that I proposed. Three weeks later he returned with a relative to talk the matter over. I explained that the whole larynx was involved in the growth, and set before them the operations of tracheotomy and excision, and read to them Solis-Cohen's statistics bearing on the matter. As my own choice I urged a simple tracheotomy. They came to no decision and left with the intention of seeking other council. On December 19, I was informed that the man had died from apnœa, refusing tracheotomy to the last.

Case 2. Epithelioma of the Larynx.—A man about 62 years; day laborer. Policlinic patient. Voice became affected more than a year ago. At times grew better then worse. Now complete aphonia. Breathing grew labored about four months ago; had to quit work. Breathing only slightly audible when at rest; becomes stridulous upon slight exertion. Deglutition has been painful for some weeks. Patient first seen March 25. Laryngoscope showed the following: there presented in the lumen of the trachea a nodulated tumor, which appeared about as large as an olive; it was covered with thick grayish secretion, and springs from the infra-glottic portion of the left vocal cord. The cord itself was of a deep red color, but its surface and vibrating edge was intact. The whole left half of the larynx was perfectly immovable, and seemed lifted above its normal plane, for upon phonation the right cord was pressed against the tumor some lines below the free margin of its fellow. With the exception of some slight congestion of the mucous membrane the right side of the larynx appeared normal. Careful examination of the neck discovered no enlarged glands. From the nodulated appearance of the growth, the complete fixation of the left side of the larynx and the constant dysphagia, a diagnosis of cancer was made. On the next day I removed with Schroetter's pincette two small pieces of the tumor which were examined by Dr. Douglass Montgomery, who reported that "both pieces were found to be papillomatous with an epitheliomatous base. In one piece there was evidently an attempt at 'nest formation.'" Thyrotomy was proposed and refused at first, but by April 28, the dyspnœa and dysphagia had become so unbearable that the man presented himself with the request that the operation be performed at once. On April 29, 9:30 A.M., patient was chloroformed and a tracheotomy done. The neck was very short, trachea almost entirely within thorax, lower border of the cricoid cartilage being on a level with the sternal notch —consequently the high operation had to be made. Considerable difficulty was experienced because of an enormous developement of the middle lobe of the thyroid gland. The isthmus had to be divided between ligatures and the first two rings of the trachea cut with bone scissors; they were completely ossified. A tampon-canula which had been made for the case, broke whilst being introduced, and it was replaced by an ordinary silver tube. When the thyro-cricoid ligament was exposed it was found perforated by the growth which was exceedingly dense and granular to the touch. The thyroid cartilage was split in the median line with bone forceps, and the wings separated with strong hooks; that portion of the larynx between the lower edge of the cricoid and the trachea was firmly tamponed

with aseptic cotton, and the growth which was much larger than it had appeared in the mirror, cut away with curved scissors. The basis of the tumor was thoroughly curetted with a sharp spoon; touched with Paquelin cautery, and the site of the wound packed with antiseptic cotton. No ligature was put into the cartilage; it was allowed to close by its own resilliancy. The whole operation including the tracheotomy occupied about an hour. Patient rallied promptly. Seven hours after the operation, temp. 100, resp. 34. Next morning a longer tube was introduced, the tampon removed, the wings of the thyroid drawn asunder, and the whole larynx carefully examined. The wound was perfectly dry, and it was discovered that the glands under the os hyoides were infiltrated, and that the thyroid cartilage itself was at several points perforated by the growth. It was then decided to do a partial resection on the next day, if the patient's condition warranted it. Next morning temp. 102.5, resp. 40. Patient took a large quantity of bouillon and egg-nogg during the day. Deglutition was quite as good as before the operation. During the night of May 1, the tracheal tube became displaced, and before the attendant could reintroduce it, great emphysema of the neck and thorax developed. Symptoms of putrid pneumonia made their appearance on this day. Patient died May 5, 11 A.M.

Case 3. Bilateral Paralysis of the Abductors and Adductors of the Vocal Cords.—Man, æt. 53, applied at Policlinic May 15; has had cough with abundant expectoration for more than a year; was told in December last by his physician that he was consumptive and advised to go to sea. Made a sea voyage to Australia and returned to San Francisco in March with less cough, but had been losing weight all the time. Hoarseness and stridor first noticed whilst on ship board. Patient a small thin man, with remarkable emaciation of face; has decided cadaveric expression of conntenance. Respiration very loud; voice a hoarse whisper, broken at every third or fourth word by a deep gasp for breath. The laryngoscope revealed the vocal cords fixed near the median line of the glottis. The fixation was absolute and neither phonation nor forced respiration altered in the slightest perceptible degree the shape of the glottis. The structures of the larynx appeared normal in color and contour. There are small cavities in both lungs; sputum rich in bacilli. The most careful examination failed to detect any source of nerve pressure upon either side of the neck, or in the mediastinum. Patient has been advised of his danger and told that tracheotomy may become necessary at any moment.

4. Unilateral Paralysis of Larynx.—Man, æt. 43, appeared at Policlinic April 23, states that whilst at dinner three days ago he was seized with a fit of coughing, during which a piece of meat he had in his mouth was drawn down into his throat. The meat stuck there and for a few moments resisted all efforts to dislodge it, when, fearing that he was about to suffocate, he seized a table knife, and, using the handle as a probang, managed to push the obstacle further down his throat. Breathing at once became easy, but the voice was hoarse, and he found it difficult to swallow even a mouthful of water. Inspection of the larynx showed the left cord fixed in the cadaveric position; otherwise nothing abnormal. The man was given a glass of water and told to swallow it; after several ineffectual attempts he managed to get a portion down, but immediately after it was regurgitated through the mouth and nose. The œsophageal sound was now introduced, which discovered an obstruction just below the level of the cricoid cartilage, and an attempt to force the obstacle brought on a violent fit of coughing during which the lump of meat was expelled. It measured nearly one and one-quarter inches in its largest diameter, and was covered with thick yellow mucus. From this moment the paralysis commenced to disappear, and five days afterwards the action of the cord was almost normal. The man, however, still complains of a decided feeling of constriction at the former site of the obstruction.

TRISMUS NASCENTIUM.

Read by Title in the Section of the Diseases of Children, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY U. V. WILLIAMS, A.M., M.D.,
OF FRANKFORT, KY.

In exploring this field we must realize that we are more in the region of conjecture than fact, more in the domain of fancy than reality. The exciting cause must of necessity be obscure in a condition that obtains in the newborn during a period of from four to six hours to as many days, and appears without warning. Life in its beginning, like its end, is very feeble, and the slightest disturbing influence may endanger the one, or hasten the other.

The various causes laid down by the authorities on tetanus in the newly born are unsatisfactory, and every one is subject to negation; most notably they are injury to the cord and pressure upon the medulla oblongata. Is it traumatic? The wound of the umbilical cord does not seem to be sufficient; probably not in one case in ten thousand births is it found to exist. All have the cord ligated, then circulation ceases, if not before; no nerves have ever been traced into, or from the cord.

In the lower animals the cord is ruthlessly torn asunder. If the disease were caused from such traumatism, its frequency would be observable in

them, more than in the infant which has been treated with greater care; still in them it does not exist at all. In the birth act, the same, or like pressure is made upon every medulla, varied only by the relative diameters of the pelvis and head and the force exercised to push or, in case of forceps deliveries, to pull the head through the bony strait, and whether the delivery is tedious or quick, natural or artificial, the disease is just the same, exceptional, and when it does occur alike inexplicable.

I have notes of thirteen cases occurring in my own and my friends' practice. In each no assignable cause is maintainable. Two cases were forceps deliveries. Four of the remaining eleven were tedious, the others natural, and all at full time. In six cases one or both parents were consumptive. In four one or both parents were addicted to alcoholic excesses, and in three there was suspicion of syphilis. Now my critic might say how many hundreds of cases were alike predisposed, and no case of trismus occurred. I say also, hundreds of cords are tied and medullæ pressed and no case occurs. True, but does not the coincidence of all having a predisposition affect the possibility that the cause may be found in a defective organization intensified by the birth act, and called into prominent existence when the creature was beginning to have a separate life, in no wise dependent upon the maternal influences. Inherited resemblances do certainly exist, mental characteristics may certainly be transmitted; equally so do the tendencies to health or disease obtain by transmission from parent to child. This we accept because the fact is patent, and every day observable, but how it is done we know not, except from that axiomatic Divine fiat "that every creature and plant shall bring forth after his seed, and of like kind." We do not know why an oak does not come of a chestnut, we only know it is impossible that it should. Equally so a perfectly developed child cannot spring from a diseased parentage, and this tendency we call predisposition. In the newborn, oxygenation of the blood is very imperfect. At the beginning the lungs act but feebly, not at all before birth. The pressure of the powerfully contracting uterus does to a considerable extent impair the maternal supply of oxygen transmitted from the placenta through the cord—obtunding the nervous influence of the child *in utero*. Such a condition is possible; if accepted, its probability is beyond dispute; thus impure blood charged with carbonic products will act upon the brain of the infant, as the adult, and cause like results—trismus and convulsions. Again, the kidneys may be the cause. Interstitial nephritis may exist, and does doubtless at birth, the blood may be charged with uric products during the first hours or days of life and poisoning ensue, causing the disease to early manifest itself. In the adult state, such does occur, especially is puerperal eclampsia attributed to such condition in part. It is asserted by physicians who practiced in the South *ante bellum* that a very commonly attributed cause of trismus among the negroes, among whose young the disease was very much more frequent than among the whites, was the inhalation of green wood smoke and the pyroligneous acid and other products of combustion. In every cabin there was a rude fireplace in which green wood was used for fuel. Ventilation was poor and the rooms were overcrowded; furthermore, the disease was oftener seen in winter than in summer. The acid products of the smoke inhaled were transmitted through the blood to the sensitive brain, there its toxic influence was the exciting cause of tetanus and convulsions.

So obscure a disease, with so many factors of causation and with so little possibility of a satisfactory solution, must of necessity remain obscure. These possible causes are offered as suggestive, more than as facts needing no further demonstration, and are designed to call especial attention to the possibility that others may determine the influence of predisposition to consumption and syphilis as being the most prolific causes. A predisposition determines *what* a disease may be; but an exciting cause determines *when* it shall be. A predisposition to consumption is inherited, depreciates the chances of long life and operates at birth, as well as in advanced life; the same is true of syphilis and alcohol, and when the vital powers are so feeble as at birth, so much more will such influences disturb the functions of life. "The blood is the life," and any abnormal condition in that fluid from consumption, alcoholism or syphilis must be reflected upon the nerve centres and retard the activity of the brain, lessen nervous energy, and act idiopathically, thereby being the promoting cause of trismus. While these views may be unsupported by a formidable array of statistics or undemonstrated by autopsies, they are the result of thirty years of constant attention to the details of a busy practice, and I hope it may call the attention of thinkers to a class of cases but little understood, and to which very little attention has heretofore been paid.

THE USE OF THE GALVANIC CURRENT AS A LAXATIVE.

BY JOHN V. SHOEMAKER, A.M., M.D.,
OF PHILADELPHIA.

Brillat Savarin well remarks, among the aphorisms with which he prefaces his "Physiologie du Gout," that the discovery of a new dish contributes more to the happiness of mankind than does the discovery of a new star. The physician may add that all such discovery is in vain in the pursuit and sum of human happiness un-

less good digestion abides with us and constipation keeps aloof. Shakespeare might, if it had been in accordance with the properties, have truly added to his phrase, "now good digestion wait on appetite," another line, "and pleasant defecation follow both."

Old, new, excellent dishes of whichever kind, are generally vanity and vexation of spirit if the consummation of all eating be not easy, regular, and attended with a species of satisfaction approaching pleasure. It would seem at first glance as if appetite and good digestion must always imply ease of defecation, and yet, although that is generally so, physicians know that there are individuals who enjoy lifelong keenness of appetite and good digestion, and nevertheless tend to be constipated. The general rule, however, is as indicated, that excellence in these conditions is associated, that absence of coördination of even the last with the other signifies malaise and ill-health.

In considering the cases of those persons who have good appetite and digestion, and yet tend to be constipated all their lives, and those of persons who experience only occasional attacks of constipation, we may add to them in lesser degree those of every man, woman, and child of civilized life, for the consideration of the subject brings us face to face with the conclusion that that particular life it is which is chiefly responsible for lowering the activity of the defecating function. Habits of body are formed by neglect as well as by practice. No longer ago than fifty years, school-girls had to be counseled that it was no evidence of feminine delicacy to neglect the ordinances of nature in this respect. Children of both sexes, even at the present day, are not generally taught that the most important hygienic duty of the day is to void the bowels. Men and women of the lower classes have no such rule of conduct. Habits come upon them, they do not seek to acquire habits, do not even know that bodily habits can be acquired. It is only when we come to the really educated in any civilized community that we find, outside of professional medical life, any appreciation of the importance of daily and copious defecation. And, at best, among all classes in civilized countries, such is the general life relating to food and exercise and general habits of living, and such the exigencies of that life, that irregularity in attempts at defecation tends to degenerate into the confirmed habit of constipation.

The conditions of civilization, pure and simple, are not, it will be observed, wholly responsible for this state of things, nor, it will be equally clearly seen, are they innocent of the responsibility, and hence instruction must have some effect in remedying the evil. Civilization prescribes that no one can normally defecate more than once in twenty-four hours, and that at a particular moment of the twenty-four hours. Hence, as that moment may be urgent for some other direction of energy, the other direction is often taken without positive necessity, and by so much every time that this happens, is the habit of defecation with ease lessened. That the conditions of civilized life have much to answer for in leading to neglect of regular defecation is readily to be seen if one going from it to a life of mountains and woods, with plenty of mental and bodily employment, ravenous appetite, and constant opportunity for immediate relief of the bowels, will note all his change of habits. He will find that he will often have a natural passage twice in twenty-four hours, instead of the single one which civilization has at best decreed for that space of time. There may not be, and often are not, indeed generally are not, any restraining influences amid the wilds. Time and place generally are propitious. Nature asserts herself without restraint, and reverts to her ancient promptings and ways. There is not a well-bred dog living in the heart of our civilization which does not first relieve himself before he is in the right spirit for his gambols, and he, like his master, and even more than his master, suffers from constipation, because even more than his master he is, when housed, constrained to habits of retention leading to constipation.

Enough has been said to indicate that constipation is generally an acquired habit in the individual. If we chose to go back to heredity, we shall find it be always an acquired habit. It is an inherited defect of civilization. Still, even under the conditions which cannot be escaped, much may be done to ameliorate the evil. Proper teachings in early youth give opportunity for development into healthful practice in later days, unremitting in intention to return to that which, however broken up for a time, should be sedulously practised until the habit is resumed.

The habit of chronic constipation, often superinduced by early and late neglect, leads through life to the abuse of cathartics, aperients, and enemas. There was a time, which I believe has now passed, when women were largely addicted to the taking of daily enemas with the view of improving the complexion. Nothing that the enema, however, could accomplish but would have been equally well secured by a natural evacuation of the bowels. The daily use of the enema was nothing but a tacit confession that there was a serious absence in the individual of proper peristaltic movement of the intestines. The practice did not tend to restore healthy function, any more than a cathartic or an aperient tends to restore it; quite the contrary, as every physician knows. All these means are temporary with relation to benefit. Exercise, food, massage, look further—to the the relief of constipation through the establishment of habit.

There is no true basis for the comparison of cathartics and aperients with enemas, as producing passage of the bowels. There is, however, a strong similarity between ordinary massage and treatment by the faradaic current; for whatever additionally the faradaic current may effect, it certainly executes massage of the most searching kind, and we find it capable, in all probability on this account chiefly, of stimulating the bowels, through percutaneous administration, to healthy peristaltic action. Here we have electro-massage as against ordinary massage, and as being both massage, even if one includes other effects besides those derived from massage, they are comparable. But what shall we say of the effect of the continuous galvanic current on the bowels? That it has such an effect, that that effect is not owing in any degree to property as massage, I shall not pause to discuss, for the statement that it has no property as massage no one will dispute.

Through treatment of prostatitis, prostatorrhœa, etc., I have been led, in conjunction with a coadjutor in the matter, to the discovery that the continuous galvanic current has, if administered as I shall describe, an immediate effect in loosening the bowels, which discovery may prove of therapeutic value in cases where treatment by cathartics, aperients, massage, or faradaic electro-massage are contraindicated, or if not contra-indicated, where they would not be so desirable as treatment by the continuous galvanic current.

In describing the mode of administering the constant current for loosening the bowels, I cannot do so well as to mention how the poles of the battery are placed in my present mode of treating enlarged prostate, etc., for it was through this, which I have now adopted in preference to the mode of adjustment which I had in common with other practitioners employed, that the effect of the continuous current upon the bowels was discovered. The intra-rectal reophore, representing the negative pole, should be introduced to the usual distance in the rectum, and the patient should be allowed, with the sponge covered reophore, representing the positive pole, to adjust it from the front on the perineum. Thus the prostate is directly attacked by the continuous current, which passes through and around it, whereas when the indifferent pole is placed, as is usual, on the thigh, it causes the current to be deflected from the true direction. Moreover, no physician can graduate a current to suit at all moments the sensitive mucous membrane of the rectum. The patient can, on the contrary, graduate it to the greatest nicety by means of more or less pressure on the reophore, or by the temporary removal of the reophore, making the current as nearly constant as anything that can be controlled by man. This mode of treating enlarged prostate, etc., is so simple and efficacious that I mention incidentally my intention to have constructed a simple apparatus to enable persons suffering from affections of the prostate, who are so situated as to be unable to receive professional treatment, to treat themselves satisfactorily.

This, then, the manipulation that I employ for treatment of prostatitis, etc., is the manipulation best adapted to treatment for loosening the bowels. The strength of the current should be about that of one milliampére, rather less than more, so that the patient will feel at first as if no current at all is passing. In the course of fifteen or twenty seconds, however, he will begin to feel it gradually rising from the cold of the olive-shaped rectal electrode to the warmth of the same object, gradually heated to a point of painless tolerance. The slowness of the increase, as well as its steadiness, seems to be a factor in the success of the result sought. Shock, or even abrupt transitions in the strength of the current, seem to be prejudicial to success. The perfect confidence of the patient, derived from the certainty that the process will be gradual, and cannot be startling at any point, conduces to the result. Every one knows how important undisturbed repose is to the successful evacuation of torpid bowels. In about a minute after the application of the current, the sensation of desire to go to stool becomes manifest, and at the end of two minutes, the average patient can generally be affected to the degree requisite to secure a pleasant passage. I think that this process can, by repetition, be made to have constitutional effects in the alleviation or removal of chronic constipation. Of this, however, I affirm nothing, but merely throw out the suggestion without assigning my reasons for thinking that the effect may be made more or less permanent.

Two phenomena attend the administration of the continuous current in the manner which I have described. They seem to point to two at least of the efficient causes of the chief effect observed: 1, Depending upon the position of the fæces, an unmistakable trickling in the rectum is perceived. 2, If the pole at the perineum be quickly removed, the sphincter of the anus forcibly contracts. The conclusion, therefore, is inevitable, that, as to the first, a general discharge from the mucous membrane is stimulated, and as to the second, that the whole of the rectum and the lower portion of the bowels is dilated, both superinduced conditions working to the desired result.

Although a divergence from the main purpose of this description, I should not omit incidentally to impress here the strongest evidence which has yet been adduced as to the differential action of the two poles in mucous membrane passages. It is becoming well known that in the urethra the negative pole dilates the passage, whereas the positive pole contracts it, and hence, that the negative pole is the proper one for relief of strict-

ure of the urethra. The rectal experiments of which I have spoken repeat this evidence with reference to the rectum, and by means of a superlative test. I have said that when the intra-rectal negative electrode is in position in the rectum, and the moist sponge-covered positive electrode is in position on the perineum, and the current is flowing, that if the latter reophore be suddenly withdrawn, the sphincter of the anus forcibly contracts. The rectum had therefore been dilated by the passage of the current, to allow of the sphincter thus forcibly contracting. Now reverse the poles, so that the electrode in the rectum shall become the positive pole, and that on the perineum shall become the negative pole, and the sphincter of the anus contracts when the negative pole on the perineum is put into position, but remains perfectly quiescent when it is *withdrawn;* just the reverse of what is observable in the other situation of the poles, and showing that the positive pole contracts. Scientifically summarized, the effects referred to are that anode closure dilates, and cathode closure contracts, a mucous membrane channel.

If it be said that, as cathode closure produces contraction of the sphincter, that is, that contraction of the sphincter takes place without previous passage of a current, and consequently without any previous dilatation of the rectum, and if one be asked what evidence there can, therefore, be that, upon anode opening, which is also followed by sphincter contraction, there had been previous dilatation of the rectum, the presentation of the difference between the cases is almost the answer to the objection. In the first case, the current not having been flowing, whatever contraction of the sphincter through cathode closure takes place, must be to below the normal size of the sphincter and rectum. As there has been no action, there can be no reaction. On the contrary, in the second case, as the current has been, and is flowing, and the contraction through anode opening is produced by breaking the current, it is obvious that whatever change takes place must be *reaction*, and as the sphincter contracts, it must be apparent that the preceding *action* of the current had resulted *in dilatation*. The mucous discharge is in strict conformity with this action, inasmuch as parts secreting do not show increase of functional activity by contraction, but by expansion.

It is easy to be understood, then, that if the rectum is expanded by the passage of the continuous current through the presence there of the negative pole, and if at the same time the inner part of the lower bowel and the rectum is laved by a rapidly secreted mucous discharge, that, independent of the dynamic effect of the current, it should, when so applied, produce discharge from the bowels, and the fact that it so operates has been distinctly proved. That, as I have said, the effects may tend to be permanent, no one who has tested the efficacy of electrical treatment in many directions will be indisposed to hope. Meanwhile, relying solely upon what has been thoroughly established as a fact, I shall patiently await the result of experience to show what are the limitations of the efficacy of the treatment herein described.

1519 Walnut St.

MEDICAL PROGRESS.

LEAD POISONING.—BINET and PRÉVOST have communicated to the Medical Society of Geneva the results of some very interesting researches on the subject of lead poisoning. Their conclusions are these: Animals poisoned by the daily ingestion of white lead presented the following symptoms: A progressive emaciation; anæmia from diminution and alteration of the blood globules, without leucocytosis; albuminuria, which, however, has been neither abundant nor constant; nervous phenomena—paralysis, aphonia, loss of reflexes, anæsthesia, rarely convulsions; the paralyses are curable when the lead is discontinued.

The anatomical features are these: A constant alteration of the kidneys, which become grayish, contracted, often cystic; nephritis and a special form of calcareous granulation, according with the type described by Charcot and Gombaut; fatty degeneration of the liver; frequently pericarditis and sometimes granulo-fatty degeneration of the myocardium; lesions of the peripheral nerves of the segmentary type; the medullary roots are rarely affected; regeneration of the diseased nerves has often been demonstrated.

The clinical examinations showed that lead accumulates chiefly in the kidneys, the quantity being greater as the intoxication is more prolonged. It is abundantly found in the bones; it seems to be deposited in the bony framework in the form of the phosphate. The liver generally contains but little lead, at least in slow chronic intoxication. The quantity may be large immediately after the ingestion of a large amount, but it diminishes rapidly and does not accumulate as in the kidneys. The muscles, spleen, nerve centres, eyes, lungs, heart, pancreas, genital organs and blood have also been examined for lead, but in all these it is found only in small quantities or is altogether absent. The embryo and the new-born animal from mothers with chronic intoxication rarely present traces of lead.

A large ovarian cyst in a rat contained a quantity of lead, especially in its walls.

Elimination: The urine carries away but little lead, hence the large accumulation in the kidneys; the quantity increases when the urine is albuminous.

The elimination in the bile is more important,

hence the small quantity of lead found in the liver.

The elimination in the saliva, excited by the administration of pilocarpin, is very feeble.

The slow elimination of lead and the sparing solubility of most of its salts explain the long retention of the metal in the body.

Two animals, after a prolonged intoxication from lead, were subjected to the influence of the iodide of potassium, but in spite of this treatment upon autopsy a large amount of lead was found in the kidneys. The same result was obtained with the ammoniacal salts.

STROPHANTHUS IN PÆDRIATICS.—DR. MONCORVO, of Rio Janeiro, has found strophanthus a very useful remedy in the treatment of diseases of children. As the result of a number of observations in its use he formulates the following conclusions:

1. Strophanthus as a cardiac and diuretic remedy in the diseases of childhood is a valuable acquisition, both on account of its promptness and energy of action and its complete harmlessness in the case of children even of a very tender age.

2. In cases of mitral or tricuspid lesions, with diminished secretion of urine, strophanthus administered in the form of the alcoholic tincture (Fraser's) promotes the reëstablishment of the heart's tonicity, regulates the rythm of its beats, and increases the amplitude and strength of the pulse. Almost without exception it acts as a powerful diuretic.

3. In the cases of pulmonary and broncho-pulmonary affections of childhood, complicated so often with cardiac insufficiency, strophanthus likewise renders excellent service as a cardiac tonic. This has been demonstrated in cases of asthma in children of from 9 to 11 years of age.

4. The therapeutical action of strophanthus does not appear to be transitory, for in a certain number of the little patients the happy results of its employment last long after the cessation of its administration.

5. No marked influence has been observed upon the central nervous system or the temperature.—*L'Union Méd.*

SOME APPLICATIONS OF SALICYLATE OF SODIUM.—DR. STILLER, of Budapest, reports on the uses of salicylate of sodium: Following the example of the English physicians in employing this remedy in diseases of the liver, he has found it to be the most energetic of chologogues. He has used it for five years in cases of gall-stone, and has satisfied himself that he is acquainted with no remedy that operates in a more certain and rapid manner. He prescribes it in four daily doses of half a gram each, given in half a glass of soda water or some effervescing draught; he generally adds to such a dose 0.01 grm. of extract of belladonna; warm flax-seed poultices should be frequently applied over the liver; strict diet should be observed, mostly of a liquid character; for drinking purposes an effervescing draught free from iron, is sufficient. Injections of morphine soon become unnecessary, and the patient should make use of the Carlsbad or Vichy cure. The writer has also found the salicylate of sodium an excellent remedy in exudative pleurisy; the fever abates after its use, and rapid absorption of the serous exudate occurs. Stiller likewise finds the salicylate of sodium possesses value as a means of differential diagnosis in cases where there is a question of serous or purulent exudate—prompt action occurring in cases where there is a serous exudate, the diagnosis and prognosis become easy. The dose of this remedy is 3–4 grm. per diem, which amount soon effects a diuretic action. Salicylate of sodium is also an excellent remedy in sciatica and recent cases of peripheral paralysis of the facialis.—*Ther. Monatshefte.*

THE CONTAGIOUSNESS OF LA GRIPPE.—DR. PROUST has recently reported to the *Academie de Medécine* some interesting facts relative to the contagiousness of *la grippe*. A ship set sail from St. Germain on Dec. 2, and at Santander took on board a passenger who had come from Madrid. The day after his embarkation he was seized with *la grippe*, although the sanitary condition of the packet had been, up to this time, excellent. Four days later the ship's surgeon was attacked by the disease, and two days later one of the crew was seized. Then the disease became general; 154 passengers out of 436 were attacked, besides 47 sailors, making a total of 201 patients. These facts seem to be sufficient to establish the contagiousness of the disease, the case being proved not simply by the complications but by the disease itself.—*La Sem. Méd.*

ETIOLOGY OF MALARIA—DR. PALTAUF, of Vienna, in a recent paper on "The Plasmodium of Malaria," confirms the views of Marchiafava and Celli. Paltauf has examined ten cases of malaria; he describes the morphological appearance of the plasmodium malariæ before, during and after the attacks, and regards it as the cause of the disease. Dr. Kahler, of Vienna, in four recent cases and one old one, also found the plasmodium. All these patients recovered under the use of quinine, although authors have given an unfavorable prognosis on account of the presence of plasmodium in such cases.

ARSENIC IN THE BONES.—The presence of arsenic in the bones has long been asserted, but it has recently been clearly demonstrated by the investigations of BROUARDEL and POUCHET. It is therefore important to look for this poison in the osseous system in medico-legal cases, especially when the poisoning is not of the most acute character.

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SATURDAY, APRIL 26, 1890.

PAUPER INSANE IN POOR-HOUSES.

After a struggle of three years, the New York Legislature has just passed a law requiring that the pauper insane shall be provided for and maintained solely by the State instead of, as heretofore, by the counties. Exception is made of the counties of New York, Kings, and Monroe, that maintain well equipped insane asylums. The local superintendents of the poor have vigorously opposed this transfer, and successfully until this time. But the necessity of this action has been strenuously urged by some physicians and a number of unselfish ladies; and if there was any doubt regarding their good judgment it was dissipated on the publication of the first annual report of the State Commission in Lunacy for 1889.

This document is one of the most remarkable reports that has been published for a long time, and one instantly asks if the abuses it portrays are true of a State possessing the wealth and intelligence of New York, what must be the condition of affairs in States that are less wealthy. We are informed that the insane departments of alms-houses contain from twenty-five in the smallest to four hundred in the largest, and that 1,848 patients are confined in these institutions. In only two of the institutions were resident physicians employed, and in only four or five others were physicians required to make daily visits. Usually the physician visited the institution from one to three times a week, and he was always officially subordinate to the keeper of the institution. Their compensation averaged less than $325 per annum, a renumeration that was certainly inadequate for the character of the services required, and they were hampered by insufficient medical stores. Case records were not kept, and the medicines were often intrusted to other patients for administration. Mechanical restraint was applied at the discretion of unskilled attendants, the diet was often inadequate, the bedding was often foul, the water supply insufficient —hot water being obtained by heating in kettles, and four or five patients sometimes being bathed in the same water. Magazines or games for the diversions of the patients were not furnished, the day attendants were usually unskilled, and there was insufficient night attendance with meagre, if any, provision against fire. A few pages that are allotted to a description of some special abuses noted by the commission, describe a state of affairs that might be supposed to be contemporary with PINEL if our experience had not convinced us, that in many of our States these abuses are paralleled if not exceeded.

It would seem as if a reform work might be intrusted by each State medical association to a committee, that each county or municipal institution containing pauper insane patients should be thoroughly inspected, and a report made of the number of cases, the capacity of the building, the professional attendance, the nursing, food, bedding and clothing, case records, restraint if any, and general features of the administration. And where the latter seemed particularly reprehensible, due publicity of the obnoxious features would undoubtedly awaken a lethargic public sentiment and the abuses would be remedied.

A PHYSICIAN'S PERSONAL HOBBIES AND PRESCRIPTIONS.

Every physician who has been actively engaged in his profession finds that there is a wide range of remedies that are valuable only in the secondary list, and that after all his main reliance in routine work is upon a few well known and long tried remedies. OLIVER W. HOLMES says: "Give me opium, wine and milk and I will cure all diseases to which flesh is heir." Now while this is hyperbolic, it appeals to the experience of all as a terse statement of fact. Just as a mechanic will fashion a wide variety of articles with a few simple tools so the physician with a few good

remedies mastered in their every detail, will meet the varying exigencies of his daily round, successfully. But this very knowledge has its dangers. It is characteristic of mental action that it repeats itself the more easily with each repetition—and we are but human. It is less labor to use the old formula again than to devise new. One man runs largely to bismuth, another to iron, another to hypophosphites. Again what is still worse routine is to treat all maladies in one line, to see nothing but disinfection for instance, or to see but one organ of the body at fault, and make the womb, or ovary, or kidney or whatnot, depending upon the individual's specialty, the offender.

It is easy to criticise and very hard to put oneself in the attitude of the penitent and say "Is it I?" and while we each may withhold our confession from the rest of the profession it is well for us to act the censor upon ourselves. Remedies are not to be ignored or discarded because they are new—nor should the new supplant the old—until by very careful observation and estimate of their efficiency, their superior merit is demonstrated.

The present temptation of the physician prone to a life of elegant leisure as well as to those who are over burdened with work, is to ignore personal responsibility, accept the formula and the dose as suggested by the enterprising manufacturer, and become in fact what they may be loth to admit—the distributors of medical wares—simply responsible for a certain vague idea that for the cure of a given disease a certain remedy should be prescribed. There are helps to the practice of medicine which may easily prove hindrances, and a habit of indolence or indifference in the matter of prescribing is not simply an imposition—it is a crime.

MEDICINE IN THE CONGO FREE STATE.

MR. HERBERT WARD, the African explorer and former officer under Stanley, has illustrated the status of medical knowledge in the Congo country by a bit of his own personal experience in the central parts of the Dark Continent. After premising that the female members of the population are so ground down and debased as to be devoid of the emotional nature, sentiment, sympathy and nearly all parental affection, he states that he met with one exception, and only one. It was in the case of a sick child whose mother obtained Mr. Ward's assistance, and received from him a good, "civilized dose of medicine," as he expresses it. The little one recovered, and at midnight shortly afterwards the traveler was awakened by a person speaking in his tent. Something was said in a soft, low tone, which Mr. Ward understood to mean that the mother in question—for it was she—wanted to thank him for his kindness to her child, and she said that she had brought him, as a present, the only thing she had in the world that possessed any value to him. It was an egg which she brought, and she had done so in this stealthy manner, at the dead of night, because if the other women of her tribe knew of her visit she would be beaten terribly. She wished Mr. Ward to have the egg cooked for his breakfast in the morning. Her wish was granted so far as the cooking was concerned, but Mr. Ward concluded not to eat it, for he discovered that it was not strictly physiological in type. Mr. Ward has described the medicine man of the tribe of the Bacongo as "a fierce-looking man with his hair all askew and a fetich in his hand." He has the power of life and death among the benighted people of his tribe, and on fête days administers poisons to the women who have been designated for sacrifice. His victims submit meekly to their medicine man's deadly dose, and will not even accept rescue, in some instances. On one occasion Mr. Ward was informed regarding the approach of a fête and sacrifice not far distant from his camp, in one of those tribes. He was told that a beautiful young woman had been chosen for the poison-cup, and he determined to push on to that village and prevent the murder. He did so, the young woman was captured by him, despite her own resistance and the opposition of all the natives. The woman was taken to Mr. Ward's camp, fed and clothed, but she took the first occasion to escape and to return to the tender mercies of the medicine man. Mr. Ward learned afterward that the ordeal was carried out in the presence of her admiring relatives and tribe, that she took the poison and died in the full courage of her convictions. The stern medicine man, likewise, was firm and did not spare his victim by giving a placebo. A more civilized practitioner would have weakened, probably, in his admiration for the victim's zeal, and spared the life so freely offered.

THE RUSH MONUMENT.

The able address of DR. WILLIAM PEPPER commemorating the life and services of DR. BENJAMIN RUSH, which was delivered at the last annual meeting at Newport, will be found in the present number of THE JOURNAL. We commend its careful perusal to all our readers. The Report of DR. A. L. GIHON, Chairman of the Special Committee, is also presented at this time, and those who were present at its delivery will be sure to read it with special interest.

The time is opportune for the re-presentation of this subject. The purposes of the Association are fully set forth in these papers, and it is sincerely to be hoped that they will so impress the minds of its members as to lead to prompt and generous action on their part, when assembled at Nashville. Among all the monumental tributes that shall express gratitude for signal achievements there should be *three* at least, commemorative of medical men: one for Dr. Rush, another for the brave WARREN, who fell at Bunker Hill, and the third for DR. EPHRAIM MCDOWELL, the father of gynecology. They must and will be built. Let the honor of the building be accorded to ourselves and not to our children.

EDITORIAL NOTES.

HOME.

THE NASHVILLE MEETING.—It is evident that the Committee of Arrangements for the Annual Meeting on May 20, has its work well in hand. The Section Committees have secured a full supply of valuable papers, which, as they are submitted, will become the property of the Association, and are to appear in due time in its journal. The gathering of Medical Editors will doubtless bring together a full representation of our best medical writers, and the Convention of Professors will give an added interest to the annual assemblage. The Nashville Meeting should be, and doubtless will be, one of the most interesting in the history of the Association.

THE ILLINOIS STATE MEDICAL SOCIETY.—The fortieth annual meeting of this Society will be held in Chicago, beginning May 6, 1890, and will continue its sessions for three days. It is a vigorous organization, and has an admirable record in the past. The coming meeting promises to be one of its *best*. There will doubtless be a large attendance. Every county in the State should be well represented.

DR. HENRY H. SMITH, of Philadelphia, died April 11, aged 74 years. He was the well-known emeritus Professor of Surgery at the University of Pennsylvania, and formerly the Surgeon-General of his State. His services to his State during the late war were most valuable, not only as an organizer of the hospital service, but in participating in the operative labors following the battles of Antietam, Winchester, Fair Oaks, West Point and Cold Harbor. His services as a teacher of surgery covered a period of thirty years. He was called to the chair of surgery in 1855, in the University, and held that position over fifteen years. His hospital appointments were numerous, and his contributions to medical literature, surgical papers, and hand-books on operative surgery were esteemed among the best of their time.

DR. J. S. DORSETT, Medical Superintendent of the Texas State Hospital for the Insane, at Austin, was violently assaulted by a patient, March 24, and was seriously injured by being struck from behind with an iron bar.

Two gigantic skeletons of mound builders have been unearthed near Hamilton, Ohio, with a well preserved specimen of pottery of the mound builder's period. The jaw bones are extraordinarily large and possess all their teeth in an excellent state of preservation.

THE cause of medical education in New York City has received a somewhat unexpected donation. The Post-Graduate Hospital and College will receive the sum of $10,000 from the estate of the late D. B. St. John, formerly State Senator from Newburgh.

THE MEDICAL EDITORS' ASSOCIATION.—The annual meeting of medical editors, as already noted, will be held in the lecture rooms of the Dental Department of the Vanderbilt University at Nashville, on the evening of May 19. Dr. I. N. Love of St. Louis, editor of the *Medical Mirror*, will preside. The medical press of this country should, and doubtless will be largely represented and a most enjoyable meeting is anticipated.

THE SPECIAL COURSE IN ABDOMINAL AND PELVIC SURGERY.—The recent special course in abdominal and pelvic surgery, by Drs. Senn, Fen-

ger, Parkes and Belfield, at the Chicago Policlinic, seems to have met with general commendation among the physicians—one hundred and twenty-seven in number—who attended. At a meeting of the class held at the completion of the course, the following resolutions, presented by Dr. E. P. Cook, of Mendota, ex-President of the Illinois State Medical Society, were unanimously adopted:

Whereas, We desire to give expression to our appreciation of the successful and satisfactory manner in which the course has been conducted to its conclusion, be it therefore

Resolved, That we would hereby convey to the faculty and officers of the Chicago Policlinic our thanks and appreciation of the discernment and skill that have conceived and executed a course demonstrative of the recent marked advances in the surgical treatment of abdominal and pelvic injuries and diseases.

Resolved, further, That we are under especial obligations to the several distinguished surgeons who, by their lectures and demonstrations, have made this, as we believe, the best course in advanced surgery ever delivered in this country.

Resolved, finally, That it is our deliberate conviction that we have here in Chicago and in the West every requisite in skill and knowledge among teachers, and in abundance of clinical material, to thoroughly qualify all who would engage in the profession of medicine and surgery.

We are informed by the Secretary of the Policlinic that the course will be repeated by the same lecturers, on a more elaborate and complete plan, next winter.

Dr. E. C. Seguin, formerly of New York City and now of Providence, R. I., visited the University of Toronto on March 11 and 12, at the invitation of the medical society of that institution, in order to inaugurate an annual lecture course pertaining to the higher subjects of medical interest. He delivered three discourses on the treatment and management of certain neuroses.

Medical Legislation.—The anatomical Bill for the District of Columbia passed the United States Senate on April 12. We anticipate that it will soon become a law, and that the study of anatomy will thus be legalized at the National Capital.

The St. Bartholomew's Hospital and Dispensary, at New York, has just issued its first annual report. It is a down-town institution especially devoted to cutaneous and genito-urinary diseases, whether specific or otherwise.

Dr. Wm. T. Belfield, 612 Opera House Building, Chicago, Ill., U. S. A., respectfully solicits information concerning unpublished cases of operations upon the prostate, especially for the relief of the so-called hypertrophy of the organ.

Marion Sims Medical College.—A new medical college, bearing the name of one of the most illustrious of medical men, is being developed in St. Louis. The organization is so far perfected that the first session will open in the autumn of the present year. A strong movement has been organized for the endowment of a hospital in connection with the new enterprise, and the prominence given to clinical teaching will be a special feature in its course of instruction.

The death of Surgeon Rufus H. McCarty, of the "Yantic," took place April 13, by pneumonia. He had been in the Naval service since June, 1875, having been appointed from Michigan.

The Medical College Conference.—We sincerely hope for best results in connection with the meeting of College Professors at Nashville in connection with the annual meeting of the American Medical Association. Possibly while Section work is being done during the several afternoons, those especially interested in the securing of more uniform standards of requirement for medical graduation can be convened for the furtherance of this important work, and by mutual conference, inaugurate a plan which shall secure the desired results.

Chicago Policlinic.—Dr. N. Senn and Dr. Chr. Fenger have been elected regular Professors of Surgery in this institution. In addition to clinical work, they will present a special course in abdominal surgery twice yearly.

FOREIGN.

Sir Manochjee Petit, a wealthy Parsee merchant, of Bombay, has donated a lac of rupees toward the founding of a leper-hospital at that city. This is about forty-six thousand dollars. It is estimated that this generous man has dispensed in charities more than a million of dollars.

The Fifty-eighth Annual Meeting of the British Medical Association will be held at Birmingham on Tuesday, Wednesday, Thursday and Friday, July 29, 30 and 31, and Aug. 1, 1890.

TOPICS OF THE WEEK.

FOOD IN ACUTE DISEASE.

We all remember the remarkable words of the late Dr. Graves, of Dublin: "Lest when I am gone you may be at a loss for an epitaph for me, let me give you one in three words, 'He fed fevers.'" Since the time when these pregnant words were uttered there has been little inclination displayed by physicians in this country to go back to the starving methods of some of Grave's distinguished predecessors or contemporaries. Yet it can hardly be doubted that the conclusion arrived at by some of the older physicians, that the free administration of food in fever occasionally intensified the febrile process, rested on some basis of practical observation; and we do not, in the present day, altogether lack occasions of observing that the indiscreet administration of food in acute diseases, food unsuitable either in quality or quantity, is distinctly injurious.

No one can be more willing than I am to recognize the necessity and importance of administering a sufficiency of food to febrile patients, especially with the object of lessening or compensating for that tendency to destruction of tissue, which is one of the most serious consequences of fever; but I am at the same time convinced that, especially in large public institutions where patients are nursed *en bloc*, the free administration of food and alcoholic stimulants is far too much a matter of routine, and sometimes partakes more of predetermination than discrimination. I have seen a nurse, a competent but very firm lady nurse, stand with teeth set and lower jaw advanced, and every firm outline of her muscular frame breathing forth unyielding determination, over a fever patient, and forcibly thrusting down his throat, an easy conqueror in this unequal struggle, the detested hourly "feed" of black beef-tea, mixed with cheap port wine (for what public institution ever uses anything but cheap port?). The poor fevered lips and parched tongue are craving all the time for "a cup of cold water," which is denied them, either because the patient is not sufficiently conscious of his wants to ask for it, or because "the doctor has not ordered it."

I would plead, then, for more discrimination and less of routine in the feeding of fever patients, and I would suggest for consideration the fact that food undigested only serves to intensify the febrile process and adds to the distress of the patient, and that in administering condensed solutions of nitrogenous extractives we may incur the danger of adding to the already large accumulation of nitrogenous waste in the blood. I would also put this question to the medical officers of hospitals: Are you satisfied that those cheap and common qualities of wines and spirits, almost universally used in such institutions, a single glass of which many of us here in sound health would wisely fear to take, are you satisfied that they do not also injuriously affect the fever patient, who, moreover, may have been entirely unhabituated before the attack to the use of such beverages?

We feed fevers and we are undoubtedly right in so doing. Bauer and Künstle appear to have established, by careful observations on the diet of typhoid fever patients, the fact that a due "supply of albuminous food to a fever patient" effects a saving of albumen in the body, "for though the excretion of nitrogen is increased, the loss of the same element from the system is reduced.', But do we not sometimes overfeed fevers, and use less discrimination than is desirable in the kinds of food we administer?

It has appeared to me that we may formulate two chief rules which should guide us in the feeding of cases of acute disease. 1. Endeavor to utilize food to the greatest extent that is safe and possible for the purpose of checking the waste of tissue which is associated with the febrile process. 2. Be careful to administer no food that cannot be readily absorbed and assimilated. Do not overlook the fact that the functions of the digestive organs are gravely impaired during fever, and therefore, if we give food which the patient is unable to assimilate, this undigested food will decompose in the stomach and intestines, and cause much local irritation and augment the pyrexial movement.

I have been accustomed to teach, and I submit that teaching to your criticism, that in acute and short typical and febrile attacks, such, for instance, as one of acute croupous pneumonia of average severity and running an average course, we should not manifest any anxiety as to the taking of much food, unless in the aged and feeble, for by forcing the consumption of a considerable quantity of food in such cases, in the absence of all appetite, and with obvious febrile derangement of the digestive organs, we do more harm than good.

There is a general consent amongst all authorities that, owing to the interruption of normal gastric digestion in fever, all food should be given in the fluid form; that is, in a form that can be readily and immediately absorbed, that it should be given in small quantities and at short intervals. The two kinds of fluid food most commonly used in cases of acute disease are, first, milk, and secondly beef-tea, and under the latter denomination I would be asked to be allowed to include all fluid meat extracts, broths, soups, meat juices, etc. The consideration of both these forms of food will probably yield some suitable topics for discussion.

The very great convenience of milk as a food has, I think, acted in a certain sense as a snare, for there is a tendency, especially with nurses, to think no evil of that which is so handy, requires no preparation, and gives so little trouble. But the great drawback in the use of milk in acute diseases is that, although a fluid food out of the body, it becomes a solid food in the stomach or intestine. No doubt it is an excellent food in all cases in which it is well tolerated and quickly digested and absorbed, but there are many cases in which it is not so, and when these happen to be cases of typhoid fever very serious injury may be done the patient if this peculiarity is not observed. I have seen several cases of typhoid in which the administration of milk has not appeared to cause any gastric disturbances, but yet has produced great intestinal irritation, and the motions have been largely composed of firm milk curd. One of the reasons why milk so fre-

quently disagrees with patients is that it is given in too concentrated a form and in too great quantity.

Sir Henry Thompson has called attention to the absurd custom, now so prevalent, of using milk as if it were a simple beverage, and to drink it like water, with quantities of solid meat and other food. Why should we hesitate to dilute the milk we give to fever patients? They require water, pure water, in much larger quantity than they usually get, and yet we hesitate to mix water with the milk we give them. Their digestive powers are excessively feeble, and yet we will give them concentrated foods! When we wish to rely on milk as a food in acute disease we should give it in small quantities at a time at short intervals, mixed with water or, better, with an alkaline water such as Vichy or Apollinaris. I am accustomed in hospital practice to prescribe powders, each containing 20 grs. of bicarbonate of soda and 20 grs. of common salt, and to direct that one such powder should be added to every pint of milk, and this to be diluted when administered with an equal quantity of water. Two ozs. of milk and 2 ozs. of an alkaline water every hour (and a fever patient requires a drink every hour) will give the patient 2½ pints of milk a day. I am, of course, thinking of cases in which the digestion of milk is difficult.

Greater use ought also to be made of the whey in those cases in which milk is not digested readily. I have often used it in private practice and in hospital with great advantage. It can be prepared in a pleasant form by boiling a pint of milk with two or three teaspoonfuls of lemon juice, and a few fragments of lemon peel for the sake of flavor; if the curd be well broken up, then strained through muslin, and all the fluid pressed well out of the curd, much of the cream and some of the finely-coagulated casein will pass into the whey, which will thus become a fairly nutritive fluid. If necessary, it can be made more nutritious by the addition of meat juice. Or if an egg be whipped up with twice as much boiling water, added slowly and then strained, a fluid will be obtained holding in suspension a considerable quantity of albumen coagulated in fine particles, and this may be added to whey (or to beef tea), thus supplying the defective albuminate.

I must not dwell longer, however, on milk. I merely make these suggestions with the view of eliciting further observations. I will ask you at the same time to consider the use of "butter-milk" as an invalid food, not so largely used in this country as in Germany, but calculated, I believe, to be of service in many cases of gastric difficulty. It is highly acid from the presence of lactic acid, and it contains the casein of milk in a very finely divided form. I have known dyspeptic patients to live upon it in comfort for considerable periods at a time, taking only a little thin water biscuit besides.

Another form of fluid food very extensively used in cases of acute disease is "beef tea." This term is usually applied to very strong extracts of beef, and this fluid is generally estimated in exact proportion to its concentration; why, I have never been quite able to understand. As I have already said, a patient with pyrexia requires and should be given much water; why not give him some of that water with his beef extract? The intense dislike of beef tea which many patients manifest is especially directed to this very concentrated form. It is mere slavery to routine—mere want of resource—that has perpetuated the invalid's sad restriction to milk and beef tea. Conceive the dread monotony of a six or seven weeks' limitation to these two articles of diet. Now there are many forms of meat infusion or meat extracts that can be rendered very palatable by suitable care in preparation, infinitely better adapted to serve as foods in pyrexial cases than strong beef tea. Well-made mutton, veal and chicken broths, to which some well-strained oatmeal or barley gruel can be occasionally added, make excellent invalid foods. They contain in a dilute form the same constituents, and, with the additions I have named, even more nutritive alimentary principles than beef tea. But clear soups—*consommes*—are exceedingly agreeable, readily absorbable and stimulating foods, and they usually contain some vegetable juices and salts which greatly add to their food value.—I. Burney Yeo, *Brit. Med. Jour.—Canada Lancet.*

ELECTRICAL INJURIES.

In an interesting article Dana, in the New York *Medical Record*, November 2, 1889, writes of the dangers of strong electrical currents. The following is a summary of some of the points which he presents:

The extraordinary increase now going on in the practical application of electricity, nearly $100,000,000 being already invested in lights and power alone.

A practically new class of injuries met in connection with the new industries. Such injuries have been heretofore produced by lightning, and they have been consequently rare.

These injuries are not numerous or serious as compared with those met with in connection with other great industries. There have been in ten years only about 100 deaths in the whole world from artificial electric currents. The railroad kills annually over 2,500 people (2,541 in 1880), and injures about 6,000 in the United States alone.

Electrical currents produce three kinds of severe accidents. They kill at once; or they burn severely; or, by the mental and physical shock, they cause traumatic neurosis. Usually, if they burn severely, they do not kill. Hence practically, the rule is, if contact with electrical wires does not kill, the victim gets only a burn or a harmless shock. In very rare cases the current seems to affect the nerves or nerve centres, causing paralysis.

The minimum current safe to receive is not definitely known. Probably 800 to 1,000 volts of continuous current, and a third less of alternating current, would not be fatal. The wires for lighting and for power carry the more dangerous currents.—*Boston Medical and Surgical Journal.*

MONUMENT TO DR. PHILIPPE RICORD.

A committee has just been organized, under the presidency of Prof. A. Fournier, with the view of raising a monument to the memory of the late Dr. Philippe Ricord. Dr. Horteloup has been appointed secretary of the committee, to whom all subscriptions should be addressed, at 76 Rue de la Victoire, Paris.

PRACTICAL NOTES.

THE ANTISEPSIS OF THE RENAL PASSAGES BY THE INTERNAL USE OF SALOL.

In the intestinal tube, says the *Therapeutic Gazette*, February 15, 1890, as a consequence of the action of the pancreatic juice, salol splits up into carbolic and salicylic acids, which are then eliminated by the kidneys, carbolic acid without being changed, salicylic acid after combining with sodium. Investigations by Nencki, Sahli, and Lépine have proved the truth of this statement beyond contradiction, and these writers have, as a consequence, recommended its internal use in "internal disinfection" in cholera, typhoid fever, and bacterial diseases. Dr. Dreyfuss (*Wiener Medizinische Blätter*, December 19, 1889), bearing these facts in mind, has recommended its use internally as a means of inducing the passage of an antiseptic fluid through the kidneys, ureters, bladder, and urethra; and claims that it acts in a much more intensive manner, and covers a wider field than can be accomplished through the injection of antiseptic fluid. Sahli further has shown that the urine of patients who have taken salol internally is aseptic, and that salol in large doses is well borne and never produces toxic symptoms. It is, therefore, quite as suitable for producing antisepsis in the urinary passages as naphthol is for the antisepsis of the intestinal tract. Dreyfuss has employed salol, either alone or in composition with various balsamics, in blennorrhœa, the full dose varying from 75 to 120 grains. Even in acute cases, treated at the very outset, this mode of treatment rapidly diminished the secretion, and in some few cases arrested it within a few days. Its effects are especially marked in combination with the use of cubebs or copaiba.

Finally, Dreyfuss recommends the use of salol in operations upon the urinary organs, for in this way the urine is kept aseptic, and one source of danger is thus avoided.

SALICYLATE OF SODIUM IN CHOLELITHIASIS AND PLEURISY.

Professor Stiller, of Buda-Pesth, has used salicylate of sodium as a cholagogue for five years, and has found it better than any other drug in rapidity and certainty of effect. He gives the following illustrative case, which is one out of many: A man, æt. 50, had suffered for about four months almost daily from severe bilious colic, and had been jaundiced for about three months. Rigors, with a temperature of 40° C., frequently occurred. He was so emaciated that his appearance suggested cancerous cachexia. The liver was enlarged and resistant, but smooth. The gall-bladder could not be felt. After a week's treatment with salicylate of sodium the pains and fever disappeared, the icteric color decreased, vomiting ceased, and after a four weeks' stay in the hospital he was dismissed cured. The details of the mode of treatment are as follows: Half a gram of the salicylate was given four times a day. It was given in half a glass of soda water, or any other alkaline water—never in wafers, as these increased the gastric irritation. Usually 0.01 gram of the extract of belladonna was added to each dose, as a non-constipating anodyne. Linseed poultices were applied over the liver. The patient was kept on moderate diet for several days, and alkaline water free from iron, was given as beverage. Occasional pains were relieved by injections of morphine. Carlsbad and Vichy water was ordered by way of after treatment. The cholagogue properties of the drug had also been proved by experiments on animals. In cases of pleurisy, Professor Stiller had noted a very striking diminution of the effusion when salicylate of sodium was given. Absorption occurred in a surprisingly rapid way, and Dr. Stiller recommended the drug, even for diagnostic purposes, as excluding the purulent character of the exudation. From 3 to 4 grams in solution were administered daily, a spoonful being given every hour or two hours. The primary effect, no doubt, was on the kidney and the increased secretion of urine favored absorption. It was only recently that he had observed, in a case under his care, that the quantity of urine was increased from 650 to 2,000, and even 2,300 cubic centimetres under the influence of salicylate of sodium. The drug was also useful in sciatica.—Vienna Corres. *British Medical Journal.*

SIR ANDREW CLARK'S PILL FOR CHRONIC CONSTIPATION.

An anti-constipation pill, a little different from some others offered for the same purpose, bears the name of the eminent president of the Royal College. It contains one-half a grain, each, of aloin, extract of nux vomica, suphate of iron, powdered ipecac and myrrh. This pill should be taken half an hour before the last meal of the day.

SALOL IN TONSILLITIS.

Salol has proven of much service in the treatment of tonsillitis and pharyngitis, when given in doses of 60 grs. per diem. It is equally serviceable in scarlatinal angina and suppurative tonsillitis. On account of its insolubility it is prescribed suspended in mucilage; shake well before using; exclusively milk diet. The dysphagia rapidly disappears, the fever subsides and the progress of the case is satisfactory.

ASSOCIATION NEWS.

American Medical Association, Fortieth Annual Meeting.

REPORT OF THE RUSH MONUMENT COMMITTEE.

Your committee find themselves, unfortunately, not able to report *progress*, measuring the actual progression during the past year by their several expectancies of life. They can not beguile themselves into the belief that, at the present rate, any of them can ever hope to see the work completed upon which they set out with such enthusiastic confidence five years ago.

When the American Medical Association convened in Washington in 1884, its members from every State and territory almost forgot the professional reason of their assembly in gazing upon the objects of interest presented to them in that most beautiful of cities. Not by any means the least attractive and admirable of these objects, which appealed to the national pride of the visitors from whatever quarter and corner of the Union, were the statues of the men whose lives are part of the nation's history, and whose names are household words in every village that boasts a school. These effigies of heroes and patriots had been judiciously distributed over widely distant parts of the city, in conspicuous sites at the intersections of great thoroughfares whose admirable topographical arrangement, giving the eye full sweep in every direction, enabled them to be seen from many far points. Here the stranger was confronted by a monument in marble or bronze of some one of the famous executive heads of the government; there by the martial figure of a military chieftain or naval captain. The contour of the Corcoran Art Gallery, embellished with marked appropriateness with marble statues of the world's great artists, had prominent among them their American compeer, Thomas Crawford. At the portals of the Supreme Court of the United States sat the counterpart in bronze of its own greatest Chief Justice, John Marshall, the *Law's* illustrious exponent; and on the green mall before the halls of *Science* stood in silent dignity the form of the scientist Joseph Henry, American by nativity, cosmopolitan in fame. Besides these and others already there, were soon to be, the visitor was told, *Religion's* testimonial of Wesley and *Philanthropy's* tribute to Peabody, while even a few deaf-mutes were planning, and have since completed, a statue of their great teacher, Thomas Gallaudet, exemplifying *Education's* contribution to our national renown.

But nowhere was to be seen, nor had yet been suggested, any evidence in stone or metal that our profession had had its memorable man. Even within the Memorial Hall of the Capitol, among the eminent citizens whose statues had been contributed, two by each State, there was no physician. So notable was this lack that the query suggested itself, Is it a fact that among the builders of this nation *Medicine* has not furnished one? Have only painters and sculptors, presidents and lawmakers, generals and admirals, scientists and discoverers, teachers and divines, philanthropists and politicians, deserved this recognition from our country? Has there been no great doctor in medicine whose life has been as exemplary as theirs? None who has, like them, merited the crown of the patriot? None whose name has been known beyond the narrow circle of his own home?

Probably the medical residents of Washington felt the more keenly the omission, of which they were daily reminded, of a memorial of a member of their own fraternity; and when, as one of these, your reporter broached the matter to several of his fellow members, he was urged by them to bring it at once before the Association, which he accordingly did in the resolution that led to the establishment of the committee who are now before you.

It was beyond question that the medical profession of the United States had within its fold in the first days of the Republic, as it has to-day, at the opening of its second century, men who were and are the peers of these in any other profession or vocation in life; but it is unfortunately true that our profession is strangely indifferent to the assertion of its proper exalted place in the social system. While in this country the physician does not meekly acquiesce in the priority of rank and precedence elsewhere given to others of far less noble occupation, we, nevertheless, do join in hurrahing over generals and admirals, and neglect to do conspicuous honor to the equally great men in our own ranks. Yet, where can there be found among the patriot heroes of the Revolution a grander figure than that of *Benjamin Rush?* Who so preëminently worthy of representing the profession of medicine among the mighty men of mark of the era of our independence? In honoring him medicine is honored and ourselves, as members of that profession, each also honored.

Your Committee had intended to review the claims of Benjamin Rush to be commemorated as the greatest physician America has ever produced, but most happily for them, Dr. Pepper in his eloquent Address on Medicine has said all and more, and that far more impressively than they could have done. What more can be said in appeal to the physicians of America to contribute the means to erect this memorial? To-day our profession in the United States numbers more than one hundred thousand members, and your Committee have felt confident that among that number there would be at least forty thousand, who would spontaneously contribute one dollar each toward the erection of a monument, unexceptionable as a work of art, a

fitting testimonial to the great man portrayed, and creditable to the great profession of which he and ourselves were members. Alas! at the end of five years, their Treasurer reports that he has only received the first thousand of that forty on which they had so confidently counted.

It is true that the histories of other great monuments reveal similar discouraging delays. The splendid memorial shaft to Washington now standing on the banks of the Potomac, and which was only dedicated, while still unfinished, on the 22nd of February, 1836, began with a resolution adopted at a meeting of a few patriotic citizens on the 31st of October, 1833, at which a scheme for raising funds by small subscriptions of one dollar each was matured and laid before the public. "The measure," says our treasurer, Dr. Toner, the historian of that monument, "met with a liberal response from the people. It was the purpose of the Society to raise and expend a million of dollars on the monument. In 1836, the sum of twenty-eight thousand dollars had been raised and securely invested at interest. Nine years later a design was accepted and three years after, on the 4th of July, 1848, the corner-stone was laid. It rose to 150 feet and then the work ceased, and for eleven years the unfinished shaft was a constant reminder of neglect, and only the approaching centennial of the Declaration stimulated Congress to contribute to its completion."

In our own immediate day, we have the lamentable spectacle of the neglect to erect the projected statue to Grant, and of the tedious delay in building a pedestal for the statue of Liberty in the harbor of New York.

Nevertheless, we have but to look across the Atlantic to Italy where a statue to a patriot physician, *Agostino Bertani*, has been conceived since this to our own greater patriot, completed and unveiled at Milan on the 30th of May of last year. How many years before our own undertaking can be completed! Or—nearer at home—to a little band, with only the community of loss of voice and hearing, who have, in four years, contributed among themselves, between twelve and thirteen thousand dollars, with which they have erected in Washington, on Kendall Green, before the National Deaf-Mute College, their monument of Gallaudet, which will be unveiled the day after to-morrow, while in five years, less than one physician in every hundred has been found willing to contribute a simple dollar to the commemoration of this greatest of American physicians!

With an object so manifestly commendable and one that has received such unanimous approval; with words of encouragement and proffers of aid to this very time, one eminent medical writer, within a fortnight, having urged us not to abandon our undertaking as "the profession do not yet appreciate Rush's claim to pre-eminent recognition," and another, a distinguished medical editor, even later saying, "You can count upon any assistance in my power to further your commendable project to honor the memory of our greatest medical patriot;" after the exalted eulogy of Rush in the eloquent commemorative address of the President of the College of Physicians of Philadelphia, Dr. Mitchell at the centennial anniversary of the institution of that distinguished body, in 1887, who approached his task "with reverent doubt of my powers to do justice to the greatest physician this country has ever produced;" after Dr. Morton's extolment of his thirty years' services as Physician of the Pennsylvania Hospital, pronouncing him "a man whose views were half a century in advance of the times;" after the address before the Medico-Legal Society of New York, by the President of the American Neurological Society, Dr. Mills, who selected "Benjamin Rush and American Psychiatry" as his most appropriate text—an association, the justice of which Tuke, of London, recognized;—after another Englishman, Benjamin Ward Richardson, in analyzing Rush's position in medicine, has directed attention to his standing as a patriot, politician, philanthropist, orator, teacher and man of letters; after the testimony of the Chairman of our Committee on Arrangements, Dr. Storer, before the Section on Obstetrics of this session, yesterday, to Benjamin Rush, obstetrician; and after the classic address in medicine to which you have just listened from the learned Provost of the University of Pennsylvania, himself so eminent that no living American physician stands above him; after all this, your committee are constrained to feel that they may be themselves to blame for the tardy progress of the enterprise, and they are, therefore, ready to resign into your hands the trust you have confided to them, that you may select others who may discover some shorter road to success than they have done. In doing so, they beg to be permitted to give utterance to the earnest wish that nothing may ever cause you to waver in the resolution you adopted with such unanimity to erect a statute in the city of Washington to this illustrious American physician.

The splendid National Medical Library and Museum, which under the auspices of the Medical Department of the Army and through the personal efforts of its distinguished curator, Dr. Billings, has been implanted in that classic ground near by the temple and museum of science, should like the latter have the effigy of its grand master to stand, as long as it shall stand, before its doors, greeting the generations of physicians and scientists, who shall visit these halls from every State of our own Union, and those who, as years pass, shall be drawn hither from foreign countries by the fame of the teachers who shall have been nurtured there. However remote that

time; however venerable this now new edifice shall have become; however lengthy the roll of great and good physicians, who during these ages shall have graced our history, the name and fame of Rush will remain undimmed and imperishable. Brother physicians of this day, we implore you each to throw his pebble on the cairn, on which shall rest a memorial of him, as imperishable as his own name, as enduring as his own fame.

All which is respectfully submitted.

ALBERT L. GIHON, M.D., Chairman.

REPORT OF THE TREASURER.

The Treasurer of the Rush Monument Committee begs leave to make this his third annual report of the financial status of the project intrusted to them by the American Medical Association.

Dr. Gihon, the Chairman of the Committee, has so ably presented the history of our efforts as well as the delay experienced in raising the necessary funds, from a wealthy and cultured profession fully sympathizing with and approving the measure, that I will not dwell upon this feature of the question. However, these delays neither prove a studied indifference on the part of our medical men nor an unwillingness on their part to contribute the necessary funds to erect the monument. The enterprise has more friends today than ever before, and the next year will, I believe, bring into the treasury more money than has thus far been raised. And simply because the work proposed has become more widely known, and every physician who is at all acquainted with the exalted character of Dr. Rush, and who loves his country and his profession, will desire to contribute his dollar to the erection of the proposed memorial.

The total amount of money that has been received by the Treasurer of your Committee is $1,119.50.

The total amount disbursed is $193.31.

Total amount remaining to the credit of the Committee in the bank of Riggs & Co. is $926.19.

The Pennsylvania State Medical Society voted $500 to the fund for the erection of the Rush Memorial Monument, to be paid $100 annually. Two hundred dollars of this appropriation has been paid and is credited in this report. The Michigan State Medical Society voted $100 to the Monument fund, which fact was mentioned in last year's report, but this contribution has not yet reached the treasury. With these amounts due, $400, and the deposit in bank, $925.19, we may confidently assert that we have available $1,325.19.

Herewith is exhibited the register which gives the names of every individual and society that has thus far contributed to the fund, with the amount given; also the bank book and the vouchers for all expenditures. Appended to the report are the names of the contributors during the last year. All of which is respectfully submitted by

J. M. TONER, Treasurer.

Adams, O. H.,[1] Vineland, N. Y.; Akins, W. T., Chicago, Ill.; Alcorn, A. W., Ravenna, O.; Allis, O. H., Philadelphia, Pa., Treasurer of Pennsylvania State Medical Society, $100; Atchison, J. B., Helena, Mont.; Atkisson, F., Ft. Benton, Mont.

Baldwin, S. C., Helena, Mont.; Barbour, G. H., Helena, Mont.; Bateman, Ephraim, Cedarville, N. J.; Battle, S. W., Asheville, N. C.; Barnett, J. R., Neenah, Wis.; Bidwell, Ed. H., Vineland, N. J.; Brooke, Edgar, Elk Horn, Mont.; Bullard, W. M., Wicks, Mont.

Campbell, Edward R., Bellows Fall, Vt.; Capron, F. P., Providence, R. I.; Carmichael, David L., Helena, Mont.; Carr, A. G., Durham, N. C.; Clark, Almon, Sheboygan, Wis.; Cole, Chas. R., Helena, Mont.; Collins, G. L., Providence, R. I.

Daly, W. H., Pittsburgh, Pa.; Dare, Charles H., Shiloh, N. J.

Eaton, F. M., Providence, R. I.; Elmer, H. W., Bridgton, N. J.; Elmer, Matthew K., Bridgton, N. J.; Elmer, William, Bridgton, N. J.

Fenn, C. M., San Diego, Cal.; Fithian, H. C., Port Norris, N. J.; Fisher, C. H., Providence, R. I.; French, S. W., Milwaukee, Wis.

Galloway, W. T., Eau Claire, Wis.; Gelsthirp, W. H., Bimini, Mont.

Hall, John H., U. S. N.; Hartman, W. B., St. Mary's, Pa.; Hasbrouck, S., Providence, R. I.; Henry, F. P., Philadelphia, Pa.; Hersey, G. D., Providence, R. I.; Hoffman, Joseph H., St. Mary's, Pa.; Hoegh, K., Minneapolis, Minn.

King, S. H., Providence, R. I.; Kumpie, J. M., White Sulphur Springs, Mont.

Lathrop, J. M., Dover, O.; Lewis and Clark County Medical Association, Helena, Mont., $16.

Mackie, Wm., Milwaukee, Wis. $5; McDonald, D. McH., Helena, Mont.; McKay, D. McH., Helena, Mont.; Mitchell, J. M., Providence, R. I.; Morgan, J. R., Providence, R. I.; Musser, J. R., Rew Lodge, Mont.

Newell, T., Providence, R. I.; Newell, Wm. L., Millville, N. J.

Parberry, William, White Sulphur Springs, Mont.; Paullen, Geo. H., Shiloh, N. J.; Penney, E. W., Providence, R. I.; Pennsylvania State Medical Society, O. H. Allis, Sec'y, $100; Peck, George, U. S. N., $3; Potter, J. Barron, Bridgeton, N. J.; Peckham, F. H., Providence, R. I.; Pittman, N. J., Farborough, N. C.; Poole, B. G., Washington, D. C.; Price, Joseph, Randolph, O.

Radeke, G., Providence, R. I.; Ragan, P. J. Virginia City, Mont.; Read, J. M., Helena, Mont.; Reeve, J. T., Appleton, Wis.; Richey, S. O., Washington, D. C.; Robison, J. D., Wooster, Ohio.

Salvail, Napoleon, Helena, Mont.; Senn, Nicholas, Milwaukee, Wis., $5.; Sheppard, Joseph, Bridgeton, N. J.; Schulen, Carl, Helena, Mont.; Sligh, J. M. Helena, Mont.; Smith, S. S., Driftwood, Pa.; Smith, Thos. J. Bridgeton, N. J.; Southerland, Carbo, U. S. A., Governor's Island, N. Y.; Smith, W. H. C., Millville. N. J.; Steel, Wm. L., Helena, Mont.; Storer, H. R., Providence, R. I.; Strathen, Thos. E., Greenwich, N. J.; Squibb, E. H., Brooklyn, N. Y.; Sutherlin, W. K., Mansfield, La.

Taser, A. A., White Sulphur Springs, Mont.; Thompson, J. C. R., Bridgton, N. J.; Tomlinson, Jos., Roadstown, N. J.; Treacy, William, Helena, Mont.

Upham, E. P., West Randolph, Vt., $2.50.

Wade, John W., Millville, N. J.; Waggoner, Joseph, Ravenna, O.; Waid, Jasen T., Ridgway, Pa.; Whittaker, John, S., Millville. N. J.; Whitney, J. O.; Pawtucket, R. I., $5.; Wiley, Charles R., Vineland, N. J.; Williams, H.

[1] When not otherwise stated the amount is $1.

N., Providence, R. I.; Wilson, C. G., St. Mary's, Pa.; Wilson, S. M., Leesburg, N. J.; Wood, E. A., Pittsburgh, Pa.; Wood, Thomas, F., Wilmington, N. C.; Woodbury, F., Philadelphia, Pa.; Wynne, H. H., Helena, Mont.

A supplemental report of the treasurer of the Rush Monument Committee containing the names of contributors to the fund at the meeting of the American Medical Association in Newport, June 26, 1889, with the amount contributed by each. J. M. T.

Anderson, J. W., Nashville, Tenn., $5.

Baldy, J. M., Pa.; Ball, James T., Judson, Ind., $5; Braman, F. N., New London, Conn., $5; Briggs, W. T., Nashville, Tenn., $5.

Clark, A. P., Mass.; Collins, James, Philadelphia, Pa., $2; Comegys, C. G., Cincinnati, Ohio, $5; Connell, $5; Cullen, $1.50.

Deaver, John B., Philadelphia; Pa., $2; Douglass, George, Oxford, N. Y., $5; Dulles, C. W., Philadelphia, Pa., $5.

Earley, C. R., Ridgway, Pa., $25; Earley, F. C., Ridgway, Pa., $5; Eldridge, J. H., East Greenwich, R. I., $2; Emerson, J. E., Detroit, Mich., $2.

Fordyce, B. A., Union Springs, N. Y.; French, Geo. M., Malden, Mass.

Garcelon, Alonzo, Lewiston, Me., $10; Glynn, A. G., Attica, N. Y., $5; Gordon, S. C., Portland, Me., $5; Greenly, Ky.; Griswold, E., Sharon, Pa., $2.

Hamilton, J. B., Washington, D. C., $5; Herr, M. S., Lancaster, Pa., $5; Herrick, H. J., Cleveland, Ohio, $5; Holmes, Edward W., Philadelphia, Pa., $5; Hulshizer, Allen H., Philadelphia, Pa., $5.

Jackson, J. W., Kansas City, Mo., $5; James, Henry, Waterbury, Vt., $5; Jennings, C. G., Detroit, Mich.

Kent, J. B., Putnam, Conn., $5.

Lathrop, M. C., Dover, N. H., $5; Littlefield, H. H., Bardstown, Ill.; Love, I. N., St. Louis, Mo.; Lunsden, W. J., Elizabeth City, N. C.

McCall, Hugh, Lapeer, Mich., $5; McClellan, B. R., Xenia, Ohio; McClure, B., Dubuque, Iowa, $5; McGaffigan, A. J., Carlyle, Ill.; Mabon, Thomas, Pittsburg, Pa., $5; Minges, Geo., Dubuque, Iowa, $2; Moore, E. M., Rochester, N. Y.; Moore, R. C., Omaha, Neb.; Morton, Thomas S. K., Philadelphia, Pa., $5.

Norris, A. L., Cambridge, Mass.; Noyes, J. F., Detroit, Mich., $5; Noyes, Robt. F., Providence, R. I., $2.

Parvin, T., Philadelphia, Pa., $5; Pennell, W. W., Frederickton, O., $5.

Quimby, I. N., Jersey City, N. J., $5.

Scott, W. J., Cleveland, Ohio, $5; Sears, J. H., Waco, Tex.; Shackford, C. H., Chelsea, Mass., $2; Smith, B. B., Providence, R. I.; Smith, E. L., Seattle, W. T.; Sothorn, J. T., Washington, D. C., $2; Stephenson, R., U. S. N., $5; Stockton, C. G., Buffalo, N. Y., $5.

Taylor, Jas. R., City N. Y., $5; Thomson, Geo. N., Boston, Mass.; Turner, H. Edward, Newport, R. I., $2.

VanWyck, R. C., Hopwell Junction, N. Y.; Vaughan, V. C., Ann Arbor, Mich., $5.

Wales, T. A, Elmira, N. Y., $5; Walker, H. O., Detroit, Mich., $5; Watson, B. A., Jersey City, N. J., $3; Whitney, J. O., Pawtucket, R. I., $5; Wyckoff, C. C., Buffalo, N. Y., $5.

UNPARALLELED LONGEVITY.—The death of the very ancient Indian known as "Old Gabriel" took place at Salinas, Cal., March 16, at the alleged age of 150. When the Franciscan missionaries reached California about a century ago, old Gabriel was then a grandfather, and they are responsible for setting down the old fellow's birth-year at 1740. He never used tobacco or alcohol and led a placid and uneventful form of existence.

SOCIETY PROCEEDINGS.

Philadelphia County Medical Society.

Stated Meeting, January 22, 1890.

THE PRESIDENT, W. W. KEEN, M.D., IN THE CHAIR.

DR. ANDREW GRAYDON read a paper entitled

NOTES ON THE USE OF STATIC ELECTRICITY IN GENERAL PRACTICE.

(*Concluded from page 588.*)

In the matter of difference of poles I have seen pain relieved in head affections with the positive current and irritated by the negative, and *vice versa*, each patient having a rule of its own governing the application. This effect of polarity I have only seen in the above-mentioned class of ailments, not elsewhere.

We can also derive from the static induced the benefits of the faradic current, with the additional advantage of a "fixed polarity and direction, and greater electro-motor force," less pain in application, and convenience in use. Powerful muscular contractions are obtained by the spark, the effect of which blow is not limited to the immediate part subjected to it, for the reflexes are deeply and widely stirred, and, as Dr. Morton puts it, we get "simple mechanical disturbances followed by a local alteration of nutrition, and reflex action from the irritation of the peripheral distribution of nerves."

The following are the deductions I would present in concluding this paper:

1. Static electricity is a safe and reliable agent in the general practice of medicine. I do not mean to say that its reliability is of such a nature that its environments are to be neglected. For example, the office in which the instrument stands must not have any dampness about it. That state of perfection has not yet been reached that will give a static current at all times in an office so damp that the paper will not stick to its walls. A wooden case can hardly be made which will not absorb some moisture in an atmosphere like that. In placing a machine I should see that there was no wet cellar under it, if the office be on the first floor; when the room is on the second it is not so material.

2. This treatment can be applied pleasantly and with benefit to the patients, and at times when the galvanic and faradic cannot be used.

3. In "static insulation" we get results only obtainable from "general galvanization" and "general faradization," without the expense of time, trouble, and exposure—and frequently, too, after both those forms have failed.

4. In many forms of pain prompt and permanent relief follows its application, such as is unequaled by other agents.

5. As a tonic in systems overwrought, overdrawn, mental grip slipping away, it performs a very important part. The readiness with which it can be applied, and the good results obtainable, prompt me to make use of its properties frequently.

6. In various forms of headaches its effects are uniformly good. It is a common remark to hear from patients, "I can feel the pain being lifted, the heaviness going," or similar expressions indicative of appreciable relief.

7. In the treatment of insomnia the use of the douche is effective, a feeling of drowsiness making itself felt during its application.

8. In treatment about the head I have found a difference in the effect between the positive and negative poles, not elsewhere.

9. The benefit of the faradic current is obtained from the static inducer.

10. Growth of hair, I have observed, has been promoted, and the falling out of it stopped in some of my cases of head pain.

Dr. Carpenter and Dr. Ranney both report remarkable changes in the appearance of so-called "ivory spots," or alopecia areata. Cases of eczema have also been reported by observers treated and cured by the spark.

I add the following from Dr. Ranney: "I have found heavy static sparks surpass any other form of electrical application for the relief of contracted muscles. Post-paralytic contractures, old deformities from preternaturally shortened muscles, often yield like magic to the influence of heavy sparks. I know of no other agent which exerts so marked an effect of a happy kind upon the 'lightning pain' observed in locomotor ataxia as do the heavy static sparks."

Other indications have been met successfully by this agent and reported by other observers.

Enough has been said, and more can be added, to satisfy any inquiring mind that in static electricity we have a force that has earned for itself a place in the armamentarium of the physician in his search for relief-giving agents.

NECROLOGY.

John Ball, M.D.

Dr. John Ball, formerly a resident of Brooklyn, died at Daytona, Florida, April 2, aged 72 years. He was a graduate from the New York University Medical Department in 1846. He made a specialty of ophthalmic practice during the earlier years of his residence in Brooklyn, which lasted about thirty-five years, but latterly he gave much attention to uterine surgery. During the past eight years he had relinquished city practice, spending several months each year in Florida.

DOMESTIC CORRESPONDENCE.

LETTER FROM BALTIMORE.

The Commencement Exercises of the Medical Colleges—The Medical School of the Johns Hopkins University—Prof. Osler's Clinics—Representatives to the International Medical Congress—The Governor's refusal to sign the State Medical Law—The Proposed Conference of the Medical Faculties at Nashville.

The season of medical instruction in this city is drawing to a close. Two of our medical schools have held their Commencements already, the College of Physicians and Surgeons leading off on March 18 with 72 graduates. The class at this school this winter numbered 343, the largest it has ever had and I believe the largest ever known in this city. Prof. Opie, the Dean of this school, who has been absent for several weeks in the South, recuperating from the effects of pyæmia, contracted in an operation on one of his patients, has returned to duty and was able to take part in the Commencement exercises. The new city hospital, a magnificent building erected by the Sisters of Mercy in the very heart of the city, affords abundant clinical material for this school. The Faculty have made a legal contract with the sisters by which they are to have forever the use of the patients for clinical instruction. This enables them to utilize the entire building adjoining the hospital and hitherto used for both college and hospital, for instruction alone, and they are already making arrangements to adapt it to its purpose in the fullest degree in the didactic and laboratory instruction of the large classes which they anticipate in the future. The Maternité Lying-in Hospital, and one-half the medical service at Bay View Asylum, the large city almshouse, are also under the control of the Faculty of this school. The success of this institution illustrates what can be accomplished by having a Dean of business capacity and large executive ability. The Faculty have also had the wisdom to surround themselves with competent young physicians who fill with energy and satisfaction the subordinate positions in the teaching corps. For instance, the pathologist and lecturer on legal medicine is the post-mortem physician of the city, who utilizes his large opportunities for the benefit of the school.

The Baltimore University, the latest candidate for medical-student patronage, having originated from a split in the Baltimore Medical College a few years ago, held its Commencement March 25, graduating twenty-six in a total attendance of fifty. There was also one graduate in the Veterinary School, which is under charge of Prof. Robert Ward, F.R.C.V.S. The Baltimore Medical College will hold its Commencement next week.

It has 100 students and the presumption is that it will have about fifty graduates.

The University of Maryland, as is well known, has decided upon a three-year course, preliminary examination, etc., to take effect in 1891. This has given great satisfaction to the large number of alumni of this old and venerable school. The same difficulty has been in the way of advance in this school as has deterred so many others from going forward in response to the demand of the day, viz.: the lack of endowment. A bequest has recently been made to it by an alumnus in the West, of a considerable amount, but it is not immediately available. The Commencement of this school will be held on the 16th inst. The candidates for graduation number 108, of whom it is expected eighty will pass the rather rigid requirements now in force. The attendance is not so large in the Medical School as last year—about 230, I understand. There are also flourishing law and dental classes; the latter numbering about 125, with forty-three graduates at the recent Commencement. The Dental School has, in common with the other leading schools of the country, adopted the three-year course.

An interesting episode took place at the close of the lectures in the School of Medicine. Professor George W. Mittenberger took final leave of the class and of the school. He has completed his half century in the service of the school, and now consummates a determination which he has desired to carry out for several years, to resign his professorship. His connection with the school began in 1837, when he became a student. On his graduation in 1840, he was appointed Demonstrator of Anatomy, in 1852 Professor of Materia Medica, and in 1858 Professor of Obstetrics. He is a model accoucheur. He was much affected in saying farewell to the scene of his long labors, and made a very touching address. The students are getting up a memorial in his honor. It is expected that Professor Michael, who now holds the chair of Anatomy, will succeed him. Laboratory instruction will shortly be made compulsory in this school, and arrangements are being made for the erection of buildings in the University grounds for such use.

The Woman's Medical College closes lectures on the 12th. Examinations will occur for the remainder of the month, and the Commencement will be held May 1. This school has a severe course of study. There are twenty students in attendance this year and seven candidates for graduation. The hospital of the Good Samaritan, with twenty-five beds, is under the control of this school.

As is well known, the medical school of the Johns Hopkins University has not yet been organized. The school is attached to the university, and owing to the failure of the Baltimore and Ohio Railroad, in which its securities are chiefly invested, and the financial difficulties consequent thereon, the University has not the funds, at present, to start the school. It is very uncertain when it will have them, and, therefore, it may be many years before the school will be put in operation. The hospital, which has its own special bequest of three and a half millions or thereabouts invested in other securities, does not share in this embarrassment, and work is progressing there steadily and satisfactorily. Several special courses have been delivered upon various subjects during the winter by the medical staff, and the clinics are open to the profession and are largely availed of, especially those of Professor Kelly. There are a large number of internes residing in the hospital, chiefly graduates of the University of Maryland.

Professor Osler has many interesting cases at his clinics. He is struck with the comparatively large number of cases of aortic aneurism with which he meets. In the course of a few months he has had no less than nineteen. His methods are very exhaustive and the microscope is in constant use, especially in the diagnosis of obscure fevers. Among the interesting cases exhibited were one of bilateral athetosis in a man æt. 24, who was yet able to earn his livelihood by using the pick, and one of cross-legged progression, the result of infantile cerebral paraplegia, in a woman aged 39. A few days ago he exhibited the amœba which is believed to be the cause of dysentery. Professor Kelly constantly performs laparotomy, and in cases which would be refused by our other local abdominal surgeons. His assistant informed me, some weeks ago, that he had operated about forty-five times in four months, with three deaths, one due to septicæmia. His success in Cæsarean section has been remarkable.

By the way, it is reported upon good authority that Professor Osler is shortly to be married to one of the ladies connected with the Training School for Nurses at the hospital. I may mention also that this training school is in a very flourishing condition, with a large number of students in attendance, and a long and most elaborate course of instruction, given by the principal members of the staff. Professors Osler and Welch will represent the hospital at the Berlin International Congress in August.

Our hopes of at last having a medical law for the regulation of practice in this State have been dashed to the ground by the refusal of Governor Jackson to sign the law passed by the late Legislature, and a copy of which is published in the last week's *Maryland Medical Journal*. He bases his objections on the ground that it is unjust. It provided for twelve examiners, seven regular and five homœopathic, for examination of all those who should commence practice in the State after its passage, regardless of the schools from which they graduated. In the beginning the homœ-

opathists were allowed three of the twelve members of the Board, which was a sufficient allowance, as they number only sixty in the State, to 2,000 regular physicians; but rather than jeopardize the law the number was increased to five. On the whole the law was a good one, and we were congratulating ourselves on its passage by both branches of the Legislature, when the announcement of the Governor's action fell like a pall upon all our hopes and aspirations. Politics, I fear, is at the bottom of his action, although some of the schools opposed it strongly. Prof. Michael, of the University of Maryland, fought hard for it, so that it was said the members of the Legislature suspected that *it might be a measure in the interest of his school*. Professor Ashby also deserves credit for his good work in connection with it. We yet hope that the Governor may be induced to change his views. If this bill fails, we are in a very hopeless condition, for it is not likely that those will be again soon found who will give up as much time and expense to the work as Professors Michael, Ashby and his colleagues.

The proposed conference of Medical Faculties at Nashville, in May, which originated, as you know, here, has met with very general notice and approval in the medical press, and favorable response from a number of the schools. It was at first intended only to stir up our own colleges here to take a forward step, but the Faculties argued why take such a suicidal step as that, and what would it advantage the cause of medical education if the Baltimore schools committed self-destruction. So it was decided as not feasible to do anything unless a large number of schools through the country joined in the movement. A proposition then came from the Faculty of the College of Physicians and Surgeons to call a national convention and make the movement a national one. A mistake has been made in supposing that the subjects mentioned in the circular to the medical schools represent the final action of the Conference. They are only suggestions upon which it was thought desirable that the delegates should be able to announce the views of their Faculties, in order that something definite might be decided. Of course, no one knows in advance what will be the decision of the Conference. In any event the measures mentioned in the circular can only be considered as representing the minimum of requirements in the new régime. Another point: it is in the highest degree desirable that *all* the schools should participate in the Conference, whether they are three year schools or not. For not only can they bring their influence to bear in securing urgently needed improvements, but we need uniformity in what is to be done. I mean that a school may have a three-year course, but it may fail to enforce a preliminary examination, or a laboratory course, or *vice versa*. Therefore there is great responsibility resting upon those teachers and schools who hold aloof in this reform movement, when their aid and influence might be productive of such good to the profession and the cause of medical education.

E. F. C.

April 10, 1890.

BOOK REVIEWS.

Handbook of Materia Medica, Pharmacy, and Therapeutics. By Samuel O. L. Potter, M.A., M.D., Professor of the Theory and Practice of Medicine, Cooper Medical College, San Francisco; Author of Quiz Compends of Anatomy and Materia Medica, etc. Second Edition. Philadelphia: P. Blakiston, Son & Co. 1890.

Dr. Potter has embodied many original ideas in the preparation of this work, some if not all of which will prove of very great value to the reader. After an ample introduction to his subject, about one-half of the entire volume is devoted to the subject of materia medica and therapeutics. A peculiarity of arrangement is here noted, for the author, instead of following the classification of remedies laid down in the introduction, has arranged his subject in alphabetical order, as best adapted for the grouping of closely related agents under the title of the principal member of each class; a method, no doubt, which will in many respects prove advantageous to the novice. In this section every preparation included in the last U. S. Pharmacopœia is fully noticed, together with the prominent unofficinal agents. The physiological action, incompatibilities and therapeutical application of each remedy is described clearly and concisely.

The second portion of the book, comprising about 57 pages, forms a very valuable feature of the work. It is devoted to pharmacy, the author's idea being that young practitioners could in many instances advantageously dispense their own medicines, and that all physicians should be well informed as regards the principles of pharmacy.

The third part of the work is occupied with special therapeutics in the form of an alphabetically arranged index to the treatment of diseases as recommended by various authorities, all of whom are specifically mentioned by the conscientious author. The plan of this chapter might be objected to by some as an ill-advised way of reaching a desired end, but we believe that it will commend itself to many a junior practitioner—for whose needs, indeed, the author has prepared his entire work.

An appendix of considerable length contains a variety of useful information of the general character of that found in many physicians' visiting

lists, and contains in addition instructions in prescription writing, supplementary to others found in the department of pharmacy.

The many and important additions to and changes in our materia medica have led to a great influx of new works and new editions of the older ones, among which we believe that the present one is destined to occupy a high place of favor.

MEDICAL AND SURGICAL MEMOIRS. Containing Investigations on the Geographical Distribution, Causes, Nature, Relations and Treatment of Various Diseases, 1855–1890. By JOSEPH JONES, M.D., Prof. of Chem. and Clin. Med., Tulane Univ. of La.; Visiting Physician of Charity Hospital; Pres. of the Board of Health of the State of La., etc. Vol. iii, (in two parts). Illustrated by Plates, Maps, Charts, Tables and Engravings. Pp. 1540. New Orleans: Jos. Jones, M.D., 156 Washington Ave. 1890.

It is necessary to see this enormous array of facts in order to form the most superficial impression of the character and extent of the work done by the author. The work is of a cyclopædic character, and offers a whole mine of information to the reader. Nearly all of the topics considered relate to the general subject of State Medicine, a department in regard to which the writer is abundantly able to speak authoritatively. In Part I the subject of quarantine in Louisiana is discussed particularly in reference to yellow fever and small-pox; the history, methods of operations, and results secured in the preservation of life and protection of commerce are fully set forth; much space is devoted to a consideration of the vital statistics of the State of Louisiana and the city of New Orleans. In this connection the writer is able to present a great many facts of the highest interest and importance, particularly in regard to the city which has so often been ravaged by pestilence. Several hundred pages are occupied with the history and practical application of vaccination, including the original papers by Jenner and his colleagues. This is one of the most prominent features of the volume and one which deserves a careful perusal; these papers are illustrated by reproductions of Jenner's original plates.

Part II contains monographs relating to medical education, teratology, nervous diseases, insanity, public and international hygiene, progress of the discovery of disinfectants and their application to the arrest of contagion, and a history of maratime hygiene as applied by the great naval powers.

One cannot too highly praise the indefatigable industry which is shown in the accumulation and publication of the observations of a life time. The department of State Medicine is rapidly assuming the importance which it deserves, and books of this character may well occupy the careful attention of all who are interested with the duties of public sanitation both at home and abroad.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. London: Longmans, Green & Co., Paternoster Row, 1889. Pp. 457.

Few medical societies can show such admirable work as that of the Medical and Chirurgical Society. The present volume is one of very great interest. It contains twenty-four papers nearly equally divided between medicine and surgery. All of these are of far more than ordinary interest and many of them are beautifully illustrated—furthermore there is hardly a paper in the volume that does not represent a large amount of personal observation and experience, and not one that does not deal with subjects alive with interest to the physician and surgeon.

As an indication of the character of the Transactions the titles of a few of the papers are mentioned: Acetonuria and its Relations to Diabetic Coma, by Samuel West, M.D.; On the Relations of Chorea and Rheumatism, by A. E. Garrod, M.D.; On a Case of Actinomycosis, by R. D. Powell, R. J. Godlee, *et al*; On the Clinical Significances of Clay Colored Stools, etc., by T. J. Walker, M.D.; Twenty-five Cases of Nephrectomy by Abdominal Section, by J. K. Thornton, M.B.; A Case of Gastro-Enterostomy, together with a Table of the Cases hitherto reported, by H. W. Page, M.C. The last mentioned paper is remarkable for the superior excellence of its illustrations.

The Physician's Leisure Library. DIABETES. By A. H. SMITH, M.D., Professor of Clinical Medicine and Therapeutics New York Post Graduate Medical School; Physician to the Presbyterian Hospital, etc. Detroit, Mich.: George S. Davis, 1889. Pp. 74.

This brochure is the result of a successful attempt to give the reader the practical points in relation to the disease under consideration. The subject is treated in a concise and able manner.

A HANDBOOK OF OBSTETRICAL NURSING, FOR NURSES, STUDENTS AND MOTHERS. By ANNA M. FULLERTON, M.D., Demonstrator of Obstetrics in the Woman's Medical College of Pennsylvania; Physician, Obstetrician and Gynecologist to the Woman's Hospital of Philadelphia, etc. Philadelphia: P. Blakiston, Son & Co., 1890. Pp. 214. Price $1.25.

This little work comprises the course of instruction in obstetrical nursing given to the pupils of the Training School for Nurses in the Woman's Hospital of Philadelphia. Its object has been very commendably carried out and it furnishes full, complete and trustworthy instruction in this

branch of nursing. No class of patients requires more careful and skilful nursing than lying-in women, and the change from the old fashioned, ignorant midwife to the modern intelligent obstetrical nurse is a notable indication of enlightenment in these days. Nurses, and physicians too, will find this book an extremely suggestive and useful one.

MISCELLANY.

HEALTH IN MICHIGAN.—For the month of March, 1890, compared with the preceding month, the reports indicate that cholera infantum increased, and that typho-malarial fever, cholera morbus, inflammation of brain, diphtheria and puerperal fever decreased in prevalence.

Compared with the preceding month the temperature was lower, the absolute humidity and relative humidity were less, and the day and night ozone were more.

Compared with the average for the month of March in the four years 1886-1889, inflammation of kidney, influenza and cerebro-spinal meningitis were more prevalent, and typho-malarial fever, puerperal fever, diphtheria, typhoid fever, inflammation of brain, cholera morbus, scarlet fever, dysentery and intermittent fever were less prevalent in March, 1890.

For the month of March, 1890, compared with the average of corresponding months in the four years 1886-1889, the temperature was lower, the absolute humidity and relative humidity were less, and the day and night ozone were more.

Including reports by regular observers and others, diphtheria was reported present in Michigan, in the month of March, 1890, at 61 places, scarlet fever at 70 places, typhoid fever at 25 places, measles at 111 places, and small-pox at 1 place.

Reports from all sources show diphtheria reported at 3 places more, scarlet fever at 7 places less, typhoid fever at 9 places less, measles at 42 places more, and small-pox at 1 place less in the month of March, 1890, than in the preceding month.

LETTERS RECEIVED.

Dr. Seaton Norman, Evansville, Ind.; The Wilmington Dental Mfg. Co., Philadelphia; Dr. F. H. Bosworth, New York; Dr. S. B. Craver, Bryan, Ohio; Rio Chemical Co., St. Louis, Mo.; J. H. Bates, New York; Dr. A. L. Hummel, Philadelphia; Dr. G. W. Davis, San Francisco, Cal.; La Gazette Médicale, Montreal, Can.; Dr. C. O. Cooley, Madelia, Minn.; Medical and Surgical Sanitarium, Battle Creek, Mich.; Dr. J. A. Scrogga, Keokuk, Ia.; Horlick's Food Co., Racine, Wis.; Dr. A. R. Bowen, Maquoketa, Ia.; Dr. H. L. Getz, Marshalltown, Ia.; Dr. S. J. Radcliffe, Washington; Dr. E. F. Walker, Providence, R. I.; J. P. C. Lewis, Catskill, N. Y.; Dr. Kennroth, Blairstown, N. J.; Dr. J. H. Kellogg, Battle Creek, Mich.; Dr. Joseph Eastman, Indianapolis, Ind.; Parisian Specialty Co., New York; Dr. William B. Atkinson, Philadelphia, Pa.; Dr. Wm. H. Morrison, Holmsburg, Philadelphia, Pa.; Dr. M. D. Hull, Arrowsmith, Ill.; Dr. R. T. Yoe, Louisville, Ky.; Dr. G. E. Humphrey, Galveston, Tex.; Doliber Goodale Co., Boston, Mass.; Dr. Jay H. Radley, New York; Dr. Eugene S. Talbot, Chicago; Dr. Bourneville, Paris, France; Dr. C. C. Copeland, North Madison, Ind.; Thos. Cook & Son, New York; The Upjohn Pill & Granule Co., Kalamazoo, Mich.; Lea Brothers & Co., Philadelphia, Pa.; Dr. W. S. Watson, Matteauwan, New York; Dr. C. B. Porter, Boston, Mass.; Dr. E. C. Kenny, Norwich, Conn.; A. H. Reffe & Co., Boston, Mass.; The Subscription News Co., Chicago; Medical Press Agency, London, Eng.; St. Joseph Medical Herald, St. Joseph, Mo.; The Ale & Beef Co., Cincinnati, O.; The Charles H. Phillips Chemical Co., New York; E. Steiger & Co., New York; T. W. Hannaford, London, Eng.; Johnson & Johnson, New York; F. O. Beckett, Washington; J. M. Ceballos & Co., New York; Dr. J. Abbott Cantrell, Philadelphia; W. H. Schieffelin & Co., New York; P. C. Lewis, Catskill, N. Y.; Dr. Wm. Pepper, Philadelphia; Parke, Davis & Co., Detroit, Mich.; Soden Mineral Springs Co., New York; Dr. Chas. E. Rogers, Minneapolis, Minn.; Dr. Albert Stifel, Wheeling, W. Va.; Dr. J. S. Philips, Allegheny, Pa.; Horlick's Food Co., Racine, Wis.; The Imperial Granum Co., New Haven, Conn.; The Addressing, Duplicating & Mailing Co., New York; Dr. G. A. White, Sacramento, Cal.; University of Pennsylvania, Philadelphia, Pa.; Dr. Wm. B. Atkinson, Philadelphia, Pa.; Wm. R. Warner & Co., Philadelphia, Pa.; Dr. M. T. Zellers, Hooper, Neb.; Dr. J. Trush, Cincinnati, O.; Geo. S. Davis, Detroit, Mich.; The Antikamnia Chemical Co., St. Louis, Mo.; Le Progrès Médicale, Paris, France; Dr. Theo. Griffin, Baxter Springs, Kan.; Dr. G. W. Gallagher, New Haven, Pa.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from April 12, 1890, to April 18, 1890.

By direction of the Secretary of War, the following changes of stations of officers of the Medical Department are ordered:

Major John V. Lauderdale, Surgeon, from Ft. Davis, Tex., to Ft. Ontario, N. Y.

Capt. John O. Skinner, Asst. Surgeon, from Ft. Ontario, N. Y., to Ft. Davis, Tex.

Capt. H. O. Perley, Asst. Surgeon, from Ft. Wayne, Mich., to Ft. Mason, Cal.

Capt. H. G. Burton, Asst. Surgeon, from David's Island, N. Y., to Vancouver Bks., W. T.

Capt. Wm. E. Hopkins, Asst. Surgeon, from Ft. Mason, Cal., to Ft. Columbus, New York Harbor.

Capt. Wm. Stevenson, Asst. Surgeon, from Ft. Verde, Ariz., to David's Island, N. Y.

First Lieut. Charles Willcox, from Ft. Columbus, New York Harbor, to Ft. Bowie, Ariz. Par. 2, S. O. 83, A. G. O., April 9, 1890.

Lieut.-Col. Joseph C. Baily, Asst. Medical Purveyor, is granted leave of absence for two months on surgeon's certificate of disability, with authority for his admission to the Army and Navy General Hospital, Hot Springs, Ark., for treatment therein, by direction of the Secretary of War. Par. 10, S. O. 85, A. G. O., April 11, 1890.

By direction of the Secretary of War, Capt. Paul R. Brown, Asst. Surgeon, now at the Army and Navy General Hospital, Hot Springs, Ark., is relieved from station at Ft. Thomas, Ariz., and will report in person to the commanding officer, Little Rock Bks., Ark., for duty at that post, reporting by letter to the commanding General, Dept. of the Missouri. Par. 3, S. O. 84, A. G. O., April 10, 1890.

Major Passmore Middleton, Asst. Surgeon (St. Francis' Bks., Fla.), is hereby granted leave of absence for three months, on surgeon's certificate of disability. Par. 1, S. O. 85, Hdqrs. Div. of the Atlantic, April 12, 1890.

By direction of the Secretary of War, so much of par. 2, S. O. 83, A. G. O., April 9, 1890, from this office, as directs the transfer of Capt. William Stephenson, Asst. Surgeon, from Ft. Verde, Ariz., to David's Island, N. Y., is so amended as to substitute the words Columbus Bks., O., in place of David's Island. Par. 1, S. O. 89, A. G. O., Washington, April 16, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending April 19, 1890.

P. A. Surgeon H. G. Beyer, ordered to the U. S. S. "Yantic."

P. A. Surgeon Rufus H. McCarty, died April 12 with pneumonia, on the U. S. S. "Yantic," at Key West, Fla.